Oakland Shines Program

Program Implementation Plan (PIP)

Prepared For:

California Energy Commission

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1. PROGRAM OVERVIEW

The Oakland Shines Program (Program) is an important choice for American Recovery and Reinvestment Act State Energy Program (ARRA SEP) funding because it will deploy immediately in a dense, 120-block area of Downtown Oakland (Program Target Area), delivered by a team whose members already work together, possessing the knowledge and experience to meet the needs of the Oakland business community that has already voiced its support for the Project. The Program will be implemented from August 17, 2010 – March 31, 2012.

The Program will install and pay Incentives for advanced lighting and HVAC Measures, including wireless technologies. The Program's design uses multiple actors to overcome numerous barriers through a phased approach that follows the life cycle of Program Measure new technologies. Many of the Measures are in early stages of deployment and as such have less cost-effective, limited track records, and are perceived as generally riskier. To succeed in the market place these technologies will need the following:

- Higher incentives than IOUs offer;
- Marketing programs that include several trusted parties providing helpful advice tailored to the decision-maker's issues;
- Stronger proof of concept with measured results; and
- Follow-up training and savings monitoring to ensure persistence and support in the next phase of outreach.

Key features of the Program include close collaboration with the East Bay Energy Watch (EBEW), an existing IOU-funded Local Government Partnership (LGP), a focused saturation campaign using multiple market actors, Incentives specifically targeted at select new technologies, and on-going performance monitoring and training.

Within the Program Target Area, the Program will apply a saturation campaign using multiple market actors to move building owners from being unaware of available energy efficiency opportunities through installation of Measures. These market actors include the City of Oakland Community and Economic Development Agency (CEDA) staff, BOMA, the Oakland Chamber of Commerce, Pacific Gas and Electric Company (PG&E), and local Installation Contractors. Many of these actors have worked together on an Oakland saturation campaign in the past, which will facilitate quick deployment of the Program. The Program has already developed a targeted list from QuEST's database that covers 18,000,000 square feet of commercial property, with a focus on serving at least 9,000,000 square feet through the Program, though all commercial Customers in the Program Targeted Area will be contacted. Further, recognizing that demand for energy efficiency takes place along a continuum, the program will keep track of all contacts so that non-participants can be followed up with later through EBEW.

Oakland is a disadvantaged community; a strategy to overcome the economic barriers is to create economic and environmental benefits using energy efficiency programs to reduce energy costs for businesses. The Program creates many co-benefits, including work for small business energy efficiency companies and career path jobs for Oakland's Green Jobs Corp participants. The Program Team will provide specialized training to an established contractor network for new Measures being offered by the Program.

The Program will use a personalized approach to create 77 jobs while delivering 8 GWh and 152,000 therms and $1.2M in annual energy savings at a rate of $488/10M Btus. All of these

very valuable benefits will accrue while meeting the goals of the American Recovery and Reinvestment Act (ARRA), California climate action policies and the City of Oakland's aggressive greenhouse gas (GHG) emission reduction goals.

Program Goals and Objectives

The goals and objectives of the Program are to:

- Significantly advance the energy efficiency level of Oakland's downtown corridor by increasing saturation of advanced lighting and HVAC technologies particularly among Class B and C properties;
- Leverage existing workforce development investment, such as the nationally recognized Oakland Green Job Corps, a partnership of the City of Oakland, the Ella Baker Center, Cypress Mandela Training Center, Laney Community College and Growth Sector, by providing work opportunities as Installation Contractors, Auditors, and engineering trainees;
- Reduce energy consumption by 8GWh and 152,000 therms;
- Improve on-going site-level energy monitoring in the Downtown Oakland corridor to increase the proper commissioning and persistence of the installed Measures, in particular controls-related Measures, lay the foundation for better energy management and retro-commissioning in the future, and provide proof of savings to future participants;
- Saturate all 18,000,000 square feet of commercial property in the Downtown Oakland corridor with education and outreach tied to energy efficiency through multiple contact points including the Oakland Metropolitan Chamber of Commerce, Oakland Chinatown Chamber of Commerce, local service organizations, Community Benefit and Redevelopment Districts, BOMA, PG&E and others with a goal of serving at least 9,000,000 square feet.

1.1 DEFINITIONS

The following definitions apply to this Program Management Plan document:

- ARRA Committee: CEC Committee charged with overseeing implementation of the ARRA-funded programs
- ARRA SEP: American Recovery and Reinvestment Act of 2009 State Energy Program
- Auditing Contractor (or Auditor): Individuals or companies approved by the Program to provide facility auditing services to Program participants.
- BOMA: Building Owners and Managers Association
- Building Classes: As defined by the Building Owners and Managers Association International (BOMA), which classifies office space into three categories: Class A, Class B, and Class C. Class A office buildings have the "most prestigious buildings competing for premier office users with rents above average for the area." Class A facilities have "high quality standard finishes, state of the art systems, exceptional accessibility and a definite market presence." Class B office buildings are those that compete "for a wide range of users with rents in the average range for the area," and have "adequate systems" and finishes that "are fair to good for the area," but that the buildings do not compete with Class A buildings for the same prices. Class C buildings are aimed towards "tenants requiring functional space at rents below the average for the area."
- CEC (or Energy Commission): California Energy Commission
- CESC: Community Energy Services Corporation

- Commission Contract Manager (or CCM): CEC-authorized representative responsible for administering the Program Agreement and its deliverables
- Contractor: *see Auditing Contractor and Installation Contractor*
- CPUC: California Public Utilities Commission
- Customer: Owner or authorized representative of existing business receiving electric and/or gas distribution service from PG&E and paying the Public Goods Charge, and located in the 120- block Downtown Oakland area served by the Program.
- EBEW: East Bay Energy Watch, a collaboration between Pacific Gas and Electric Company and local governments, non-profit and for-profit energy service providers in the San Francisco East Bay area dedicated to providing innovative turn-key energy efficient improvement measures and technical services to small business, residents, and municipal customers in Alameda and Contra Costa counties. Eligible sites receive a free energy assessment to identify potential energy-saving equipment options; the total cost of installation is offset by rebates paid by the program. Retrofits offered are designed to maximize energy savings and comfort, and contribute to a cleaner environment.
- Energy Commission (or CEC): California Energy Commission
- Energy Upgrade California: The CEC's Statewide ARRA branding effort
- Ex-post Savings: Verified savings after the retrofit installations are complete and have been evaluated
- HVAC: Heating, Ventilation, and Air Conditioning Systems
- Incentive: An identified and pre-specified amount of money to be paid to Customer for the installation of one or more identified Program Measure(s) at the Customer's facility. The Incentive amount is determined using an analysis of the Customer's existing equipment and the Measure(s) to be installed.
- Installation Contractor (or Installer): Individuals or companies approved by the Program to provide Measure installation services to Program participants.
- IOU: Investor-owned Utility. Unless indicated otherwise, all references to an IOU herein shall mean PG&E.
- Leverage Funds: Either in-kind or direct cash contributions to the delivery of the Program
- LGP: Local Government Partnership
- Measure: A service or a product installation, the operation of which results in more efficient and reduced on-site energy use, compared to what would have happened without the service or product installation.
- OMB: United States Office of Management and Budget
- PACE: Property Assessed Clean Energy
- PG&E: Pacific Gas and Electric Company, a California IOU.
- POU: Publicly-owned Utility
- Program: The Oakland Shines Program
- Program Agreement: Contract between QuEST and CEC governing work provided by QuEST for the Program.

- Program Manager: Individual or company engaged by QuEST to manage Program operations.
- Program Partner: Individual or organization working cooperatively, but not contractually, with the Program Team to facilitate the achievement of Program goals and objectives. Program Partners include PG&E, BOMA, the Oakland Metropolitan Chamber of Commerce, the Oakland Chinatown Chamber of Commerce, the Oakland Rotary Club, The Crucible, and East Bay Bicycle Coalition.
- Program Period: Implementation term of the Program while receiving ARRA SEP funds under the Program Agreement, August 17, 2010 – March 31, 2012.
- Program Target Area: 120-block area in Downtown Oakland, California, bounded by Grand Avenue, Interstate 980, Oak Street, and the Oakland Estuary.
- Program Team: Group of individuals and companies working together contractually to implement the Program, including QuEST, CESC, CirclePoint, City of Oakland, and Phoenix1.
- Project: The installation of Program Measures at a Customer facility.
- Project Administrator (PA): Individual or company responsible for the oversight of Project Manager.
- Project Manager: Individual or company responsible for the oversight of Project implementation.
- Public Goods Charge: Non-bypassable systems benefit surcharges imposed on retail electric and gas Customers to fund energy efficiency, renewable energy, research, development and demonstration, and low-income assistance programs.
- QA: Quality Assurance
- QC: Quality Control
- QuEST: Quantum Energy Services & Technologies, Inc.
- Retrocommissioning or RCx: A systematic process for optimizing an existing building's performance by identifying operational deficiencies and making necessary adjustments to correct the system.
- Retrofit: 1) Construction that involves complete removal, redesign and replacement of the energy consuming systems of a building or process; 2) Projects that require design and selection of new systems based upon the needs of new or modified space function(s); and 3) major tenant improvements that add new load.
- Subcontractor: An individual or company engaged by a member of the Program Team to perform Program support services on a contingent basis.
- Technical Advisor: California Lighting Technology Center (CLTC). The CLTC facility includes full-scale lighting, day-lighting, and photometric testing laboratories, emerging technology demonstration areas, and classrooms. The laboratories are used for research projects and technical services. CLTC researchers and engineering utility the facility's technical resources to gather data and affiliate members have access to these service and resources.
- Technical Coordinator: QuEST is the Program Technical Coordinator ensuring Program Team members, Installation Contractors, and Customers have access to appropriate technology providers and information.

- Third Party Program: Program implemented by a "third party" (individual or organization other than the IOU), which is administered by IOU as part of its Energy Efficiency Program Portfolio and designed to deliver demand reductions and/or energy savings.
- Workforce Development and Training Lead: An individual or organization responsible for management and oversight of the Program workforce development and training activities.

2. DETAILED SCHEDULE OF ACTIVITIES

2.1 MONTHLY WORK PLAN

Table 1 outlines regular monthly Program activities.

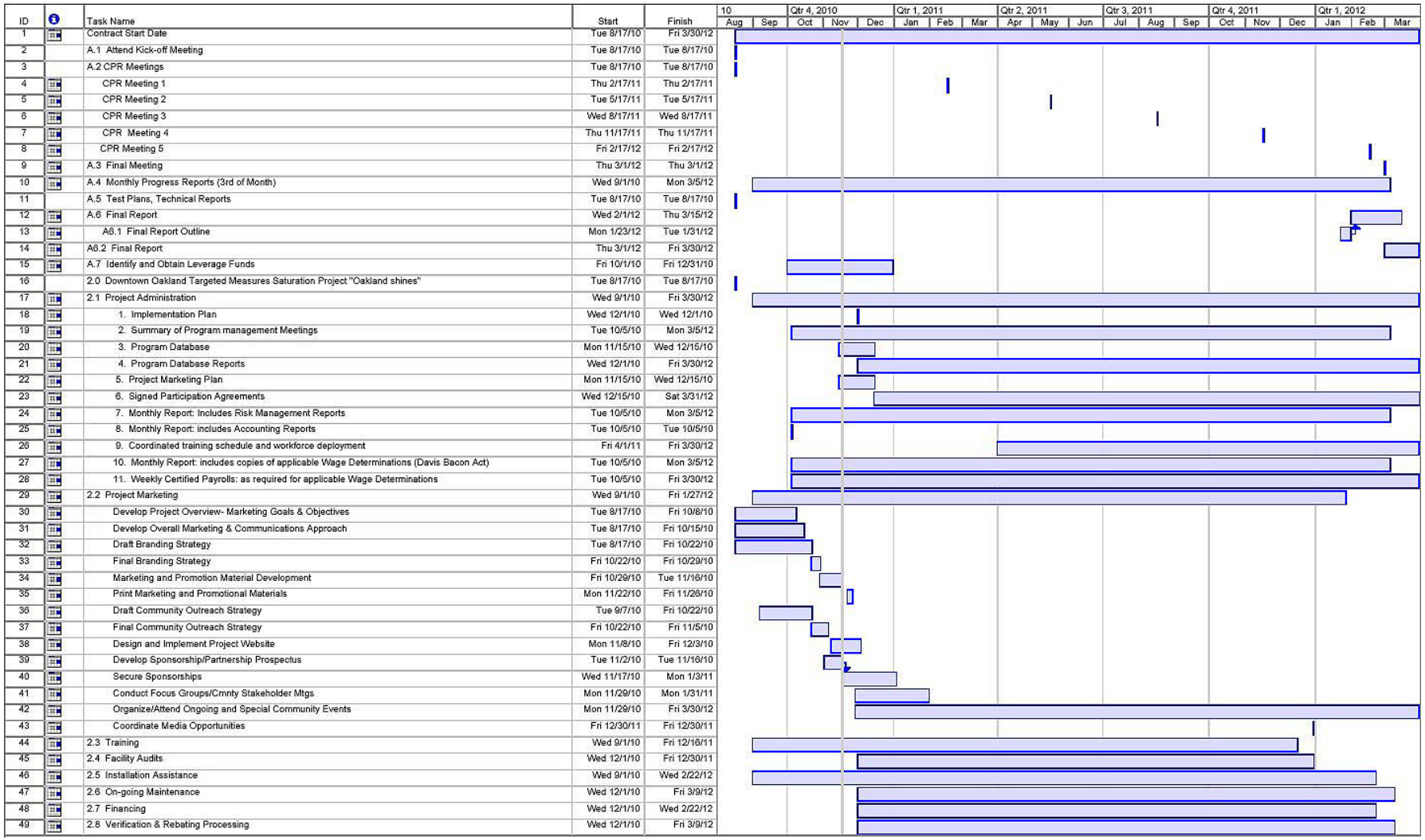
Table 1: Regular Monthly Program Activities

Day of Month/ Frequency	Activity Deliverable
10th	SEP Progress Report
15th	Invoice
Bi-Weekly	Davis-Bacon Act Reporting (submission of certified payroll copies)
30 days after identification of Projects that may generate waste	Waste Management Plans for new Projects
Weekly	Program Management Meetings
Monthly	Program Team & Partners Meeting
On-going	Community Outreach
On-going	Customer Contact
On-going	Marketing
TBD: Based on coordination between Customer and Installation Contractor	Project Installation

2.2 IMPLEMENTATION TIMELINE

Figure 1 illustrates the Program implementation timeline.

Figure 1: Program Implementation Timeline



ID	Task Name	Start	Finish
1	Contract Start Date	Tue 8/17/10	Fri 3/30/12
2	A.1 Attend Kick-off Meeting	Tue 8/17/10	Tue 8/17/10
3	A.2 CPR Meetings	Tue 8/17/10	Tue 8/17/10
4	CPR Meeting 1	Thu 2/17/11	Thu 2/17/11
5	CPR Meeting 2	Tue 5/17/11	Tue 5/17/11
6	CPR Meeting 3	Wed 8/17/11	Wed 8/17/11
7	CPR Meeting 4	Thu 11/17/11	Thu 11/17/11
8	CPR Meeting 5	Fri 2/17/12	Fri 2/17/12
9	A.3 Final Meeting	Thu 3/1/12	Thu 3/1/12
10	A.4 Monthly Progress Reports (3rd of Month)	Wed 9/1/10	Mon 3/5/12
11	A.5 Test Plans, Technical Reports	Tue 8/17/10	Tue 8/17/10
12	A.6 Final Report	Wed 2/1/12	Thu 3/15/12
13	A6.1 Final Report Outline	Mon 1/23/12	Tue 1/31/12
14	A6.2 Final Report	Thu 3/1/12	Fri 3/30/12
15	A.7 Identify and Obtain Leverage Funds	Fri 10/1/10	Fri 12/31/10
16	2.0 Downtown Oakland Targeted Measures Saturation Project "Oakland shines"	Tue 8/17/10	Tue 8/17/10
17	2.1 Project Administration	Wed 9/1/10	Fri 3/30/12
18	1. Implementation Plan	Wed 12/1/10	Wed 12/1/10
19	2. Summary of Program management Meetings	Tue 10/5/10	Mon 3/5/12
20	3. Program Database	Mon 11/15/10	Wed 12/15/10
21	4. Program Database Reports	Wed 12/1/10	Fri 3/30/12
22	5. Project Marketing Plan	Mon 11/15/10	Wed 12/15/10
23	6. Signed Participation Agreements	Wed 12/15/10	Sat 3/31/12
24	7. Monthly Report: Includes Risk Management Reports	Tue 10/5/10	Mon 3/5/12
25	8. Monthly Report: includes Accounting Reports	Tue 10/5/10	Tue 10/5/10
26	9. Coordinated training schedule and workforce deployment	Fri 4/1/11	Fri 3/30/12
27	10. Monthly Report: includes copies of applicable Wage Determinations (Davis Bacon Act)	Tue 10/5/10	Mon 3/5/12
28	11. Weekly Certified Payrolls: as required for applicable Wage Determinations	Tue 10/5/10	Fri 3/30/12
29	2.2 Project Marketing	Wed 9/1/10	Fri 1/27/12
30	Develop Project Overview- Marketing Goals & Objectives	Tue 8/17/10	Fri 10/8/10
31	Develop Overall Marketing & Communications Approach	Tue 8/17/10	Fri 10/15/10
32	Draft Branding Strategy	Tue 8/17/10	Fri 10/22/10
33	Final Branding Strategy	Fri 10/22/10	Fri 10/29/10
34	Marketing and Promotion Material Development	Fri 10/29/10	Tue 11/16/10
35	Print Marketing and Promotional Materials	Mon 11/22/10	Fri 11/26/10
36	Draft Community Outreach Strategy	Tue 9/7/10	Fri 10/22/10
37	Final Community Outreach Strategy	Fri 10/22/10	Fri 11/5/10
38	Design and Implement Project Website	Mon 11/8/10	Fri 12/3/10
39	Develop Sponsorship/Partnership Prospectus	Tue 11/2/10	Tue 11/16/10
40	Secure Sponsorships	Wed 11/17/10	Mon 1/3/11
41	Conduct Focus Groups/Cmnty Stakeholder Mtgs	Mon 11/29/10	Mon 1/31/11
42	Organize/Attend Ongoing and Special Community Events	Mon 11/29/10	Fri 3/30/12
43	Coordinate Media Opportunities	Fri 12/30/11	Fri 12/30/11
44	2.3 Training	Wed 9/1/10	Fri 12/16/11
45	2.4 Facility Audits	Wed 12/1/10	Fri 12/30/11
46	2.5 Installation Assistance	Wed 9/1/10	Wed 2/22/12
47	2.6 On-going Maintenance	Wed 12/1/10	Fri 3/9/12
48	2.7 Financing	Wed 12/1/10	Wed 2/22/12
49	2.8 Verification & Rebating Processing	Wed 12/1/10	Fri 3/9/12

2.3 CRITICAL PROGRAM REVIEW SCHEDULE

In order to determine if the Program should continue to receive CEC funding and if it should, if there are any modifications that need to be made to the tasks, deliverables, schedule or budget, the Program Manager and the CEC shall conduct Critical Program Review meetings (CPRs). CPRs will provide the opportunity for frank discussions between the CEC and the Program Manager. CPRs will generally take place at key, predetermined points during the Program Period, as determined by the Commission Contract Manager. However, the Commission Contract Manager may schedule additional CPRs as necessary, and any additional costs will be borne by the Contractor. The first CPR meeting shall take place within the first six months of the Program Agreement start date.

Participants include the Commission Contract Manager and the Program Manager, and may include the Commission Contracts Officer, other CEC staff and Management as well as other individuals selected by the Commission Contract Manager to provide support to the CEC.

The Commission Contract Manager shall:

- Determine the location, date and time of each CPR meeting with the Program Manager. These meetings generally take place at the CEC offices in Sacramento, California, but they may take place at another location.
- Send the Program Manager the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. One of the outcomes of this meeting will be a schedule for providing the written determination described below.
- Determine whether to continue the Program, and if continuing, whether or not to modify the tasks, schedule, deliverables and budget for the remainder of the Program Period, including not proceeding with one or more tasks. If the Commission Contract Manager concludes that satisfactory progress is not being made, this conclusion will be referred to the CEC's ARRA Committee for its concurrence.
- Provide the Program Manager with a written determination in accordance with the schedule. The written response may include a requirement for the Program Manager to revise one or more deliverable(s) that were included in the CPR. The written determination may also include the CEC decision on the amount of ARRA SEP funds to encumber into the Program Agreement.

The Program Manager shall:

- Prepare a CPR Report for each CPR that discusses the progress toward achieving Program Agreement goals and objectives. This report shall include recommendations and conclusions regarding continued work of the Projects.
- Submit the CPR Report to the Commission Contract Manager and any other designated reviewers at least five (5) business days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Program Agreement.

2.4 RISK MANAGEMENT PLAN

In order to identify and mitigate detected risks that affect Program performance and successful outcome, the Program Manager will continuously monitor Program activities to identify and mitigate detected risks such as.

- Participant Recruitment. Ensure sufficient participation of Installation Contractors and Customers by monitoring and actively managing recruitment efforts, adjusting as necessary to ensure targets are met.
- Retrofit Installations. Ensure all retrofits are installed and invoiced prior to March 31, 2012 by working closely with any Subcontractors, Program Partners, Installation Contractors and/or Customers as required to ensure timely completion of Retrofit activities.
- Financial Records**.** Ensure accurate, independent financial records.
- Workforce. Develop, maintain, and guarantee required levels of workforce availability throughout Program.
- Leverage Contributions. Ensure that leverage contributions are met in a timely and comprehensive way by working closely with Program Partners to meet schedule and deliverables.
- Labor Costs. Avoid the effects of rising or volatile labor costs by training and hiring staff that will be paid uniformly during the Program Period.
- Equipment and Service Costs. Minimize rising Retrofit service and technology costs.
- Incentive Payments. Revising Incentive processing mechanisms, as needed, to ensure Incentive due diligence and prompt payments to Customers.
- Schedule. Schedule Program training and implementation activities to avoid schedule lag and to complete final verification and reporting requirements by March 31, 2012.
- Retrofit Quality. Assure Retrofit performance quality by engaging Installation Contractors in Program activities, and conducting post-install audits to verify that Retrofits are operating properly.
- Customer Care. Scrutinize performance of all entities to avoid Customer complaints.

The Program Manager will prepare and submit to the Commission Contract Manager by the tenth day of each month a monthly risk management assessment within the body of its regular monthly report that identifies perceived risks and actions taken (or to be taken) to mitigate these risks.

2.5 ROLES AND RESPONSIBILITIES OF PROGRAM TEAM MEMBERS & PROGRAM PARTNERS

Program Team

The Program will be managed by QuEST with guidance and from the City of Oakland. QuEST will team with the City of Oakland, Public Works (PWA) and Community and Economic Development (CEDA) Agencies, CESC, CirclePoint, and Phoenix1to deliver the Program to commercial Customers in the Program Target Area.

QuEST will manage all day-to-day activities and all Program Team members, and will report directly to the Commission Contract Manager. Specifically, QuEST will:

- Create and implement administrative infrastructure and systems as necessary to ensure the Program is clear, documented, and auditable.
- Create Program policies and procedures

- Provide general management including: issue resolution, status tracking, adaptive management, ongoing communication with the Program Team members and Program Partners, form and website updates as necessary, and marketing/outreach, invoicing and reporting.
- Provide Program Team member and Program Partner coordination
- Manage the activities of Program Team members to fulfill accounting and reporting requirements.
- Review ARRA, U.S. DOE, Federal, State of California, Energy Commission, and SEP Accounting and Reporting requirements as per the Program Agreement.
- Based on review of accounting and reporting requirements, draft comprehensive schedule of reporting requirements and deadlines.
- Maintain relevant accounting and reporting records throughout Program
- Conduct Program Management Meetings on an as-needed basis with the Program's core management team to review the overall Program progress and budget status; and develop strategic improvements to the service delivery model and other Program elements as appropriate.
- Conduct meetings approximately on the second or third week of every month between the Program Manager, Program Team members and other Program Partners, as appropriate. A summary of these meetings or the topics discussed may be included in the Monthly SEP Reports.
- Conduct meetings on an as-needed basis between the Program Manager, Program Team Members and other Program Partners to share Program updates and develop modifications to the service delivery model and other program elements, if appropriate.
- Develop a tracking database to track communications, Measure status and estimated savings. QuEST will work with the Energy Commission to determine Program data tracking and reporting needs. Program staff will collect and populate the Program database with information to include but not limited to: facility contact (title, address, email, and phone); Measure status and estimated savings; Incentive amount; Leveraged Funds and referrals to other financing sources; coordination with IOUs, POUs, and Third Party Programs; miscellaneous communications/notes to file.
- Provide reports from the database upon request by the Energy Commission and regularly in periodic reports to the Energy Commission. All data in the database shall be provided to the Energy Commission at the conclusion of the Agreement.
- Closely monitor and manage Program activities to meet scheduled milestones, including completing all retrofits and meeting Program energy savings goals by 3/31/12, delivering monthly SEP Progress Reports and CPRs (including completion of the first CPR within six months of the program start), delivering Case Studies, and conducting training workshops.
- Require Program participants to sign a one-page Project Participation Agreement, which will explain the need for Program evaluation and request their cooperation in working with evaluators after the conclusion of Project implementation.
- Continuously monitor Program activities to identify and mitigate detected risks such as: participant recruitment, Retrofit installations, financial records, workforce development, Leverage Funds, labor costs, equipment and service costs, Incentive payments, schedule, Retrofit quantity and Customer complaints.

CESC will provide facility assessments (energy efficiency audits), Customer audit presentations, Program lighting Measure installation and Project management services.

CirclePoint will provide Program communications strategy and community outreach services for the development and implementation of a campaign to both raise awareness, and recruit neighborhood leaders and boosters for the Program.

City of Oakland PWA and CEDA will collaborate on development of a comprehensive Program database, Program marketing and community outreach.

Phoenix1 will provide services associated with providing and distributing Program print materials, mailing services, specialty and promotional products.

Program Partners

Some Program Partners will assist the Program in applying its saturation campaign to move building owners from being unaware of available energy efficiency opportunities through installation of Measures. Other Program Partners will provide assistance in the design and implementation of the Program's workforce development activities. Program Partners include PG&E, BOMA, the Oakland Chamber of Commerce, Oakland Rotary Club, The Crucible, the East Bay Bicycle Coalition (EBBC), and the Oakland Green Jobs Corps (OJGC), which was founded in 2008 in a partnership of the City of Oakland and the Ella Baker Center, and is operated by Cypress Mandela Training Center, Laney Community College, and Growth Sector.

PG&E Account Representatives will aid by providing Program information or materials to their commercial Customers.

BOMA will aid in the distribution of Program information and materials to its members.

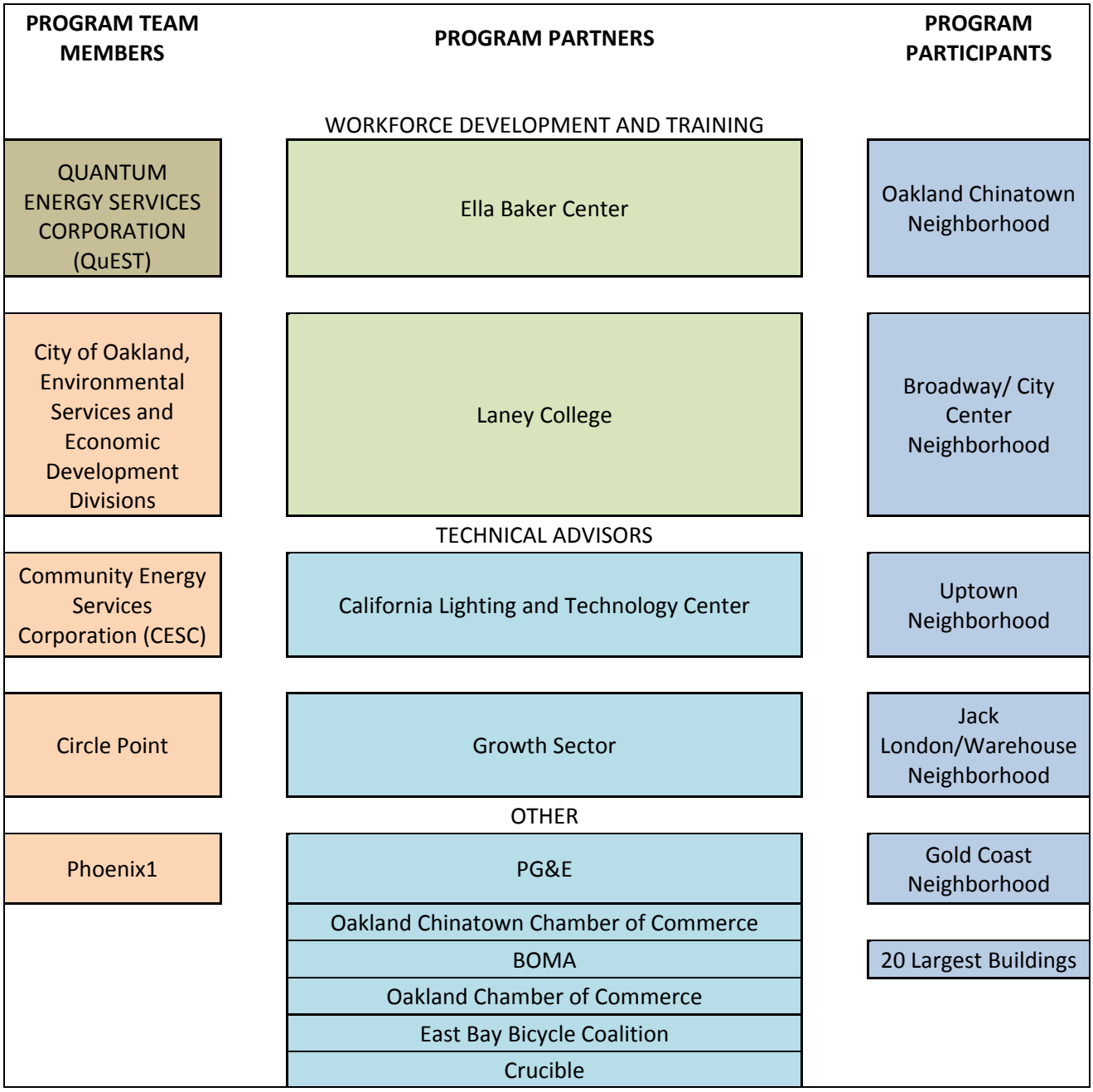
The Crucible, an Oakland-based metal works company, and the **EBBC** will assist with the creation of mobile projects including a Bike/Light demonstration project by constructing a mobile energy consumption system that will support the understanding of energy generation and usage as a participant peddle, and a typical work cubicle environment to demonstrate the amount of energy required to power commonly used office equipment.

The Oakland Rotary Club and the Oakland Chamber of Commerce will aid in the distribution of Program information and materials to its members.

Oakland Green Jobs Corps (OJGC), a partnership of the City of Oakland and the Ella Baker Center, operated by Cypress Mandela Training Center, Laney Community College, and Growth Sector, will assist in the development and implementation of Program workforce development activities.

Figure 2 illustrates the organizational structure of the Program, including Program Team members, Program Partners and Program Participants.

Figure 2: Program Organization Chart



3. MARKETING PLAN AND RELATED ACTIVITIES

The Program Team's primary objective for marketing and communications is to reduce the market barriers to implementing energy efficiency projects. Typical barriers that are often cited by small, medium and large businesses are lack of time, cost and expertise, particularly when facing multiple options. Based on Program Team experience in numerous markets, the Program team will incorporate the following approaches as key best practices for commercial and industrial program marketing and outreach:

- Employ multiple-channel marketing and outreach: Work with utility account representatives, targeted customers, motivated Program Partners;
- Engage Program Partners as extended outreach staff, building jobs;
- Offer one-on-one technical services to help reduce market barriers (calculate the potential energy savings, explain the differences between options);
- Design a program that is easy for both customers and Program Partners:
    - Minimize required steps in the application process
    - Minimize the data requested on the application
    - Allow customers to redirect the incentive payment to their vendor or contractor
    - Assist customers through the process
- Seek a balance between quality assurance and minimizing the hassle and transaction costs associated with program participation

In order to quickly disseminate Program information to the market and draw participants into the Program, the Program will employ a multi-pronged approach for its marketing and community outreach campaign using coalitions built around Program Partners and their knowledge of the Customers located within the Program Target Area. The Program Team will identify key potential Program Partners, and work with PG&E and the City of Oakland to identify key Customers that will be likely participants. The Program Team will create basic Program announcement pieces as an early communications tool, and utilize social marketing and integrated public communications to reach these likely participants.

The approach will include the following elements:

- Leveraging existing Customer relationships with Program Partners
- Direct Customer outreach
- Special events and forums to raise public awareness and interest
- Marketing via Program Partners
- Case studies of early Projects

3.1 COORDINATION WITH ENERGY UPGRADE CALIFORNIA BRANDING EFFORT

To the greatest extent appropriate and practicable, the Program will coordinate marketing and outreach activities with those of the Energy Upgrade California branding effort. At a minimum, the Program will integrate the Energy Upgrade California brand in Program marketing material and will include a link to the Energy Upgrade California website on the Program website. In so far as the Program is a commercial program, the Program Manager will consult with the Commission Contract Manager to determine what additional efforts might be appropriate and required.

3.2 MARKETING MATERIALS

Primary Program marketing materials will include:

- Program kickoff announcement
- Program flyer
- Customer Enrollment Application
- Program 20 Building Energy Challenge postcard
- Program window decal for 20 Building Energy Challenge participants
- Program webpage

- Technology fact sheets
- Case studies of successful Projects

Additional materials will be developed as needed to support Program goals and objectives, and may include such items as billboard, bus and bus shelter ads and banners.

QuEST will deliver draft marketing materials to the CCM for review and approval. Materials will be designed, produced, and supplied in hard copy and in electronic format.

3.3 COMMUNICATIONS STRATEGY

The Program marketing and communications strategy will be designed to inform customers of the availability and benefits of the Program and easy-to-follow instructions on how to participate. It will also work to position the Program Team as an unbiased, trusted resource that helps Customers make the right decisions and develop the business case to sell the investment in energy efficiency within their organizations.

QuEST will work closely with Program Partners to develop marketing strategies and tactics. Due to time and budget constraints as well as cost-effectiveness requirements, it is critical for all Program marketing efforts to be maximized for effectiveness. QuEST's approach for achieving this entails simplifying the entire process for the Customer by being a "one-stop-shop" for energy efficiency services and eliminating multiple program contacts, paperwork, and the general confusion of participating in more than one program.

For general awareness and communication to a broad audience, the Program Team will employ low-cost communication vehicles to generate program interest. Public relations, websites, e-mail blasts, and community presentations (including one-on-one Customer visits) will provide effective ways to get the message out with relatively minimal cost. Most of the materials that we develop are best distributed through a program website where potential applicants can download program materials.

Marketing efforts will be targeted to the decision-makers especially those that can initiate multiple facility implementations simultaneously. PG&E is a vital Program Partner and, through work being conducted by EBEW, already has contact with many of these targeted building owners through their representatives for large customer accounts. This advantage will be put to use by the Program, as will past Program Team work with numerous building owners and existing relationships. The City of Oakland has already gained support for the Program through its outreach efforts. The Program Team will leverage its alliances with associations to explore opportunities for free or low-cost advertising for program. Many of the trade and business association publications highlight success stories relevant to their membership, which offers an effective channel to reach a targeted segment of customers.

Communications Channels

The Program's biggest marketing distribution network is our staff. Team members are all trained to answer customer questions and guide customers through the application process. This personal approach helps motivate Customers to act and provides them with the support they may need to participate. The Program Team has very positive experience with one-on-one visits when prospective clients are slowed down by confusion. Because the Program will occur in a 120 block area, the Team can cost-effectively use its successful approach of one on one contact to dispel myths and help participants make excellent choices.

Additionally, the Program will use a wide-range of other communications channels to effectively reach its target audiences, including:

- Program Webpage

- Program Blog
- Web Links to Program Webpage on:
  - Program Team sites
  - PG&E site
  - Oakland-centric sites (e.g., abetteroakland.com and oaklandlocal.com)
- Social Media:
  - Facebook
  - Twitter
  - You Tube
- Traditional Media (public service announcements):
  - Print
  - Television
  - Radio
- Direct Advertising:
  - Billboards
  - Street Banners
  - Bus Stop Shelters
  - BART Stations
  - Exterior/Interior Building Banners
  - Program Staff
  - Newsletters
- Demonstration Projects:
  - Bike Light Project
  - Oakland Asian Cultural Center
  - Office Cubical
- Sustainable Energy Forums
- Energy Reduction Challenges
- Special Events

Promotional Programs

To allow for direct contact with every commercial Customer in the Program Target Area the Program Team has created two distinct programs to promote Oakland Shines: The Oakland Energy Challenge, and the Boots on the Ground Campaign.

OAKLAND ENERGY CHALLENGE

The 20 Building Oakland Energy Challenge is a friendly competition for commercial property managers and office tenants, which acknowledges participants for their achievements in greening their operations through quarterly building celebrations and media recognition. The Oakland Energy Challenge helps participants move down the path towards environmental sustainability, and, in some cases, towards third-party green building certification through the ENERGY STAR® and LEED™ rating systems. Challenge participants and their members will be encouraged to measure and track energy usage; develop a plan for energy improvements; make energy efficiency upgrades; and help spread the energy efficiency word to other. Kiosks equipped with a web-based tracking tool will be used in each of the buildings to quantify successes in layman terms; Banners will be hung in each of the buildings announcing campaign, goals and challenge; Quarterly events will be hosted at participating buildings to recognize individual/group successes through an reward program and recognition (energy czar

trophy) at the event; The large-building component will provide detailed audits focusing on Retrofits (standard and emerging technology) and Retro-commissioning.

BOOTS ON THE GROUND CAMPAIGN

The Boots on the Ground Campaign will call for contact with owners and tenants of smaller buildings and will consist of a door-to-door campaign focused on encouraging audits followed by incorporating standard and emerging technology Retrofits.

The Program Team will also identify the various account types (restaurants, office, retail, multi-family housing) within each area as a basis for understanding the types of improvements that can be recommended for a particular property.

The Program Target Area has been divided into five focus areas to provide distinct and meaningful messaging to the target audiences within each focus area and will be implemented based on a sequential strategy that has six components:

1. Identify Communities
2. Make Connections
3. Understand the Issues
4. Learn about Community Needs and Promote Energy Audits
5. Implement Energy Reduction Measures
6. Recognize and Celebrate

Identify Communities

A first and critical component of the Program outreach strategy will be to establish trust and create a support network for each commercial Customer within the Program Target Area. To occur successfully, QuEST has divided the Program Target Area into five distinct sectors: Uptown, Broadway City Center, Gold Coast, Chinatown and Jack London. Each sector is defined by a series of unique characteristics that will be considered and incorporated into a customized approach for helping potential participants understand the Program and its offerings.

- **Uptown**: Located just north of the center of downtown Oakland. The target audience in the Uptown area is generally quite sophisticated about sustainability and is primarily English speaking with small pockets of automobile maintenance businesses where the audience may require language translation.
- **Broadway City Center**: Core area of Oakland, California's central business district roughly bounded by 6th Street on the southwest, Jefferson Street on the northwest, Grand Avenue on the northeast, and Harrison Street on the southeast. Target audiences in the Broadway City Center area have either implemented various sustainable and energy-related improvements or are aware of the need for them. Most speak English as a first language.
- **Gold Coast**: Includes several districts and is bordered by the Laney College campus on the south. The target audiences in this area will combine participants that are very knowledgeable about the need to reduce energy consumption with those who have had limited exposure to the notion of energy reduction and economic sustainability of a property. The Program will be required to use a variety of tools in this area to increase

knowledge of Program benefits. It is anticipated that most clients will speak English as their first language.

- **Chinatown**: This neighborhood district area encompasses Laney College, Chinatown, and the Oakland Museum, Civic buildings of Alameda County the City of Oakland main Library, the Oakland Museum of California, and the channel connecting Lake Merritt to the estuary. There are many diverse residents, students, and commercial businesses that make up the "community" of this area, and Chinatown functions as a citywide center for the Asian community. After English, Cantonese is the primary language spoken within this target area. Translation of Program materials and presentations into Chinese and Vietnamese will be required. The Boots on the Ground team will introduce the energy reduction campaign through a series of small meetings organized by blocks to allow simultaneous translation in Chinese where there are significant pockets of non-English speaking citizens. This will also allow the identification of additional translation needs to allow the Program Team to conduct one-to-one dialogues with property owners and tenants
- **Jack London**: Located at the south end of Broadway, across the Oakland Estuary from Alameda. Jack London Square is part of the Jack London District and a popular tourist attraction on the waterfront of Oakland, California. The commercial Customers within this focus area are generally well educated about energy reduction techniques but may not be making a connection between energy reduction and bottom line business savings. Most clients within the area will speak English as a first language.

Make Connections

Individuals and leadership organizations within each of the five focus area will be identified to participate in an early discussion and brainstorming of Program and Project goals and objectives. Sessions will include a discussion of past practices and new methodologies. Participants will be asked to complete a survey and provide feedback to the outreach plan. Recommendations will be incorporated into a final outreach strategy to be implemented within each of the five focus areas.

QuEST staff will host a kickoff event to announce the 20 Building Energy Challenge, and a luncheon with area property managers to teach about energy reduction, enroll participants in the Challenge and sign up property managers for an energy audit to start the process.

In addition to direct dialogue with potential Program participants and the Oakland Energy Challenge, the Program will also use multiple media sources to contact businesses within the Program Target Area. Media sources may include a website, print materials including postcards and flyers, radio, public television, advertisement on local buses, billboards and bus shelters. Written information will be developed in English, Chinese, Vietnamese and Spanish. CESC will contact each business owner and discuss Program benefits and request to perform energy audits as a first step to energy consumption reduction. Where necessary, an interpreter will be brought in to assist with translation.

Media tools to be utilized during the campaign will include use of several mobile projects including a Bike/Light demonstration project, and a typical work cubicle environment to demonstrate the amount of energy required to power commonly used office equipment. QuEST will partner with the Crucible, an Oakland based metal works company and the East Bay Bicycle Coalition (EBBC) to construct a mobile energy consumption system that will support the understanding of energy generation and usage as a participant peddles. A second mobile project will construct a typical office cubical environment where building tenants and property

managers can understand the amount of energy required to operate typical office equipment through physical manipulation.

Understand the Issues

Commercial Customers within the five focus areas will be contacted by CESC on an individual basis to complete an application for an energy audit. The audit will help the owner/tenant and Program Team understand property needs associated with energy reduction and operational overhead costs.

Learn about Community Needs and Promote Energy Audits

The Boots on the Ground campaign will be led primarily by CESC. Once permission for an energy audit is granted and performed, CESC will meet with each commercial Customer to review audit results and recommendations. Savings measures will be translated into understandable implementation projects tied to a timeline and estimate of energy and monetary savings. Projects will be presented to the client with an emphasis on reducing energy consumption and decreasing operation costs.

As the Program Team continues to learn about the communities within the focus area, staff will have an on-going presence at community events and local farmers markets to help inform and encourage participation in the Program. The Program Team will create opportunities for area youth to be educated on the need to reduce energy consumption through assemblies, discussions and projects at area elementary, junior high and high schools.

The Ella Baker Center will be engaged to canvass each neighborhood to announce the availability of free energy audits. This will be preceded by training at the Center in green-building techniques with an emphasis on reduction of energy consumption and leadership development. Where possible, the project team will identify opportunities with youth from the Ella Baker Center for job and apprenticeship placement.

The Program Team will also have an on-going presence in the Laney College classrooms and will participate in panel discussions with students studying for careers in mechanical and electrical construction. Where possible, the Program Team will identify opportunities for students enrolled at Laney College to be involved in the campaign as interns to CESC and QuEST.

Implement Energy Reduction Measures

Businesses in the Program Target Area will be encouraged to establish an energy reduction team. The team will be an important element in developing, implementing and promoting reduction of energy consumption. The Program will offer an energy management strategy to help measure energy performance, set goals, implement projects that reduce consumption, track savings, and reward improvements for commercial buildings within the Program Target Area. The value of strong energy management will be highlighted noting that leaders achieve superior financial performance over those businesses slow to adopt in energy management. The Program Team will promote behavioral changes within an organization through introduction of an Energy Reduction Tool Kit for Oakland businesses. The Tool Kit will include tips and methods to reduce energy consumption as both an individual staff member and as a building owner or operator.

Recognize and Celebrate

In addition to creating a tangible, visible benefit for Program participants through reduced overhead costs associated with energy bills, participants will receive various forms of acknowledgement as they move through process. A window decal using the Oakland Shines logo will be presented to each tenant/building owner when they sign up for an energy audit. Certificates of Participation will be presented to those business that take the steps to implement some of the audit recommendations and a Oakland Shines trophy will be presented to businesses at special luncheon that reduce energy consumption by more than 10 percent. These businesses will also be given permission to use the Oakland Shines campaign logo when promoting their business.

Figure 3. illustrates the structure of the Program community outreach campaign

Figure 3: Program Community Outreach

Table 2 lists the Program's Partners and Outreach Allies.

Table 2: Program Partners and Outreach Allies

CITYWIDE	COMMUNITY/NEIGHBORHOOD	MEDIA
• Pacific Gas and Electric • BOMA • Stop Waste.org • East Bay Community Foundation • OBDC Small Business Finance • Oaklandish • Inner City Advisors • Apple Computer	• Oakland Chinatown Chamber of Commerce • Oakland African American Chamber of Commerce • Ella Baker Center • Laney College • The Crucible • East Bay Bicycle Coalition	• Oakbrook • Mills College Journalism Department • Bay Area News Group • KQED – California Report • City of Oakland • Oakland Metropolitan Chamber of Commerce • Youth Radio

• CB Richard Ellis • Signature Properties • World Savings • Dryers Grand Ice Cream, Inc. • Shorenstein • Golden State Warriors • Metrovation • Safeway International Headquarters • Safeway Northern CA Division Offices • Stop Waste.org		

3.4 PROGRAM PARTNERS

Program Partners represent various businesses such as contractors, vendors, distributors, manufacturers, engineering firms, architects, energy service companies, energy consultants, building developers, and financial institutions. Program Partners are key players in promoting the Program to Customers. They have regular interaction with Customers and have a vested interest in selling their energy efficiency products and services. Effective Program Partner education also speeds application processing.

Citywide, Community and Neighborhood Partner support and relationship building will be central to Program outreach success. Stimulating the leveraged marketing generated by Program Partners will be a continuous effort. A few Program Partners are "self-starters" and will aggressively market the program with minimal support; however, most Program Partners require periodic contact to address issues related to new equipment that can be promoted, overcoming customer objections to energy efficiency upgrades, and building enthusiasm for the Program. In the past, QuEST has successfully increased Program Partner promotion by targeting a specific market or sector and offering rewards for increased participation, and will do the same for the Program.

The first step in engaging Program Partners is to identify and contact the largest contractors and equipment suppliers in a particular market and to schedule outreach meetings with those companies individually. The Program Team has spoken to several firms about their interest and understanding of the Program Measure technologies, and has begun discussing collaboration opportunities with Program Partners in the lighting industry.

3.5 CASE STUDIES

The Program will develop case studies of successful Projects which will work as a marketing tool by prove the efficacy of Program Measures and the Program as a whole.

QuEST will produce up to four case studies, as follows:

- 1 large commercial Customer Project
- 2 small commercial Customer Projects
- 1 highlighting efforts and successes in Chinatown

4. WORKFORCE DEVELOPMENT AND TRAINING

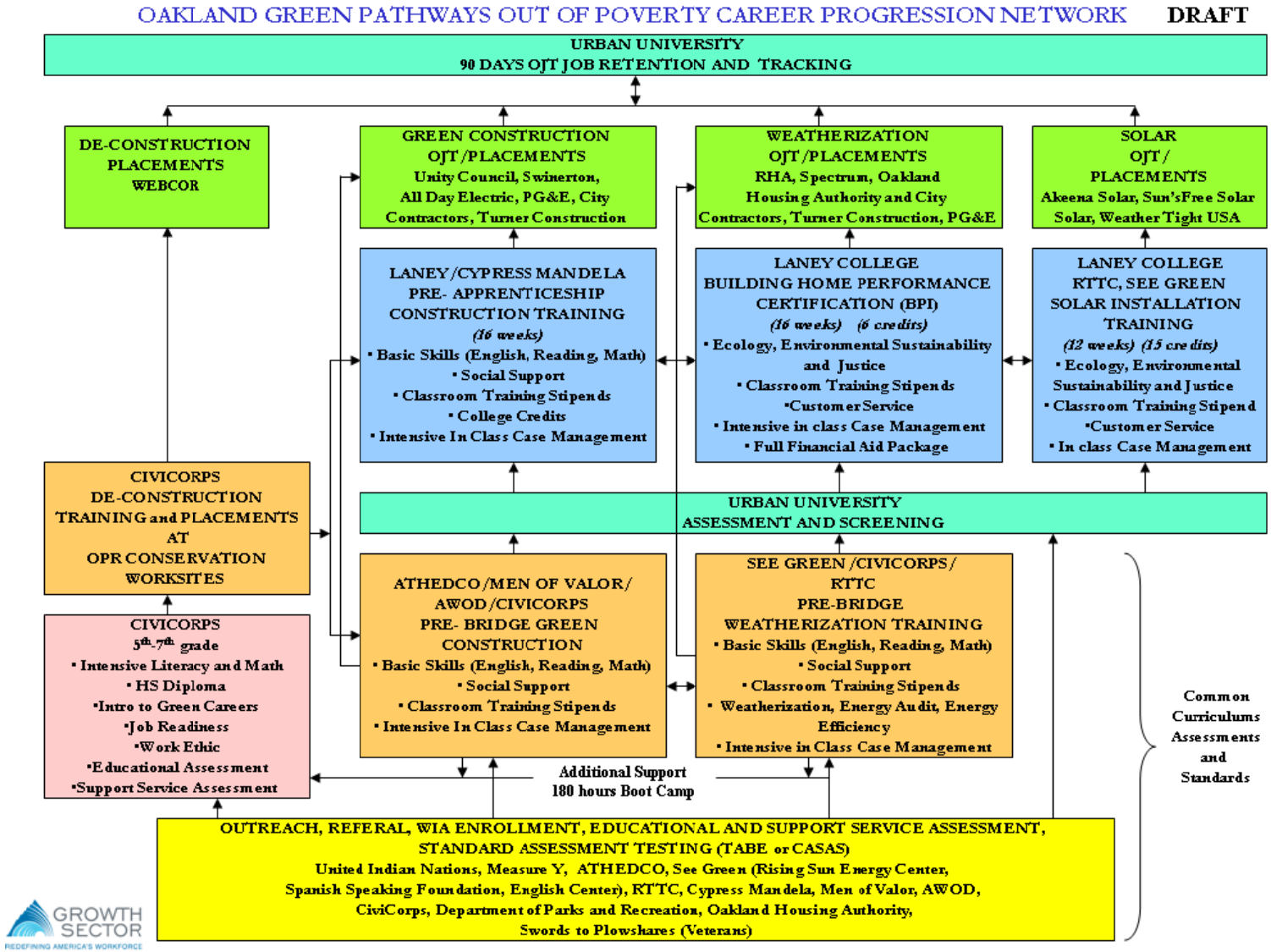
4.1 WORKFORCE DEVELOPMENT PARTNERS

The Program Team will work with the following Program Partners to develop and deploy Program workforce development activities in conjunction with Oakland's Green Pathways workforce development initiative:

- Oakland Green Jobs Corps (OJGC), which was founded in 2008 in a partnership of the City of Oakland and the Ella Baker Center, and is operated by Cypress Mandela Training Center, Laney Community College, and Growth Sector:
    - The Ella Baker Center, which works to give people opportunities and skills to work together to strengthen its communities, will be engaged to canvass the Program Target Area to announce the availability of free Program energy audits.
    - The Cypress Mandela Training Center serves mainly men and women of color, including re-entry, at risk youth, and underemployed individuals, providing both basic level, "pre-bridge" green construction training, and advanced level training in pre-apprenticeship green construction skills. Building performance and weatherization training will incorporate duct blast testing, blower door testing, infra-red camera training, and whole building performance testing and assessment; HVAC principles; heating system trouble shooting, and window and door framing and installation techniques. In addition, the class will prepare participants for BPI certification, as well as state required certification, and general safety training.
    - Laney Community College supports the hands on training provided by Cypress Mandela with a more academic treatment of core technical and environmental concepts. Laney will also act as the lead agency in administering the $1 million energy efficiency grant from the CEC, which should supply qualified candidates to work on Projects funded by the Program
    - Growth Sector, a non-profit workforce intermediary focused on connecting disadvantaged youth with quality employment opportunities in high paying green jobs, will leverage its existing partnership with 12 Oakland/East Bay employers in the green energy and construction fields to develop job opportunities for local youth.
- Green For All will assist QuEST in hiring interns for three-six month job training and shadowing.

  The City of Oakland's Green Pathways workforce development initiative is presented below in Figure 4.

Figure 4: Oakland Green Pathways Workforce Development



4.2 WORKFORCE TRAINING SPECIFICALLY RELATED TO PROGRAM

QuEST will focus on providing an introduction to engineering and energy efficiency program management. Working with Laney College and the Ella Baker Center, QuEST will hire interns for three-six month job training and shadowing to introduce graduates to jobs that require two-four year college degrees. Green for All and the Ella Baker Center graduates will work directly with degreed engineers and energy efficiency program mangers. The goal is to provide both job training and experience with multiple aspects of the energy efficiency sector, in addition to exposing graduates to the idea of college. Trainees will gain experience conducting higher level engineering with a Professional Engineer including data collection, site walks, review of architectural drawings, calculation of energy conservation measures, etc. Program management experience will include review and execution of Program Implementation Plan, project marketing, marketing material development, reporting, and program tracking.

The Ella Baker Center will also host trainings to prepare those engaged to canvass the Program Target Area to announce the availability of free Program energy audits. These trainings will focus on green-building techniques with an emphasis on reduction of energy consumption and leadership development.

CESC will train individuals coming out of Oakland's workforce development program. It is assumed the individuals have received job and life skills training and are ready for real-world work experience. CESC will work with these students to learn the skill of inventorying lighting technologies. This will include the ability to identify different lighting types (such as differentiating between linear fluorescent fixture types, high intensity discharge, and LEDs, as well as different control technologies) and counting the different fixture types by building interior or exterior areas.

The Program Team will create opportunities for area youth to be educated on the need to reduce energy consumption through assemblies, discussions and projects at area elementary, junior high and high schools.

The Program Team will also have an on-going presence in the Laney College classrooms and will participate in panel discussions with students studying for careers in mechanical and electrical construction.

Beyond the above-described Green Pathways workforce development, QuEST will also sponsor training programs with existing building contractors and facility managers. Workforce development will be targeted at two different groups, those that desire to work in the trades or as small commercial auditors, and those that are considering two or four year college as part of their continuing development.

4.3 TRAINING MATERIALS

CESC will develop materials to be used to train Workforce Development graduates to become adept at energy auditing in commercial spaces, to sell the PIER advanced technologies and manage the installation of Projects. The following outline will guide the development of these training materials:

I. Introduction

- Mission statement
- Goals and Objectives

II. Program Policies and Procedures

- General Operations
    - BEAM (database)
    - Chain of command/Teaching Team
    - Audits
    - Inspections

III. Energy Efficiency Opportunities

- How to qualify a Customer
- What to look for
- Identify PIER technologies
- Lighting concepts and terms
    - Lamp types
    - Ballast Features
    - Daylighting
    - Controls
- Appropriate applications
- Comprehensiveness
    - Refrigeration
    - HVAC
    - Window Film
    - Water Heater
    - Solar Potential
    - Envelope Efficiencies
    - Plug Loads

IV. The Energy Auditing Process

- Energy Auditor role
- Collecting data
    - Site Survey Check List
    - Signed Site Access Agreement
    - Signed Data Release Form
- Who to interview at facility
- What questions to ask
    - Light quality concerns
- Tools required
- Reporting Requirements
    - ROI
    - Payback
- Presenting proposal to Customer
- Building Commissioning

V. Understanding A Retrofit

- What's involved
- Who does work
    - Program Contractor
    - Outside contractor
    - DIY
- What is expected of Installer

VI. Inspection Process

- What to look for
- Punchlist

- Finalizing Project

VII. Definitions

4.4 INCLUSION OF WORKFORCE DEVELOPMENT GRADUATES IN PROGRAM IMPLEMENTATION

Ella Baker Center trainee graduates will be engaged to canvass the Program Target Area to announce the availability of free Program energy audits

Working with Laney College and the Ella Baker Center, QuEST will hire interns for three-six month job training and shadowing to introduce graduates to jobs that require two-four year college degrees. Laney College and the Ella Baker Center graduates will work directly with degreed engineers and energy efficiency program mangers.

Once trained by CESC in lighting technology inventorying as described in Section 4.2 above, individuals may join CESC's team to assist in the following activities:

- Conduct walk through audits with a seasoned auditor to assist in inventorying lighting fixtures and controls
- Conduct inspections that will require the individual to fill out an inspection by counting and identifying the proper lighting and control types
- Assessing the value and savings the lighting retrofit provides

This experience forms solid foundation for the job market, professional mentoring and job placement in energy technology companies, engineering firms, facility management and related disciplines.

Where possible, the Program Team will identify opportunities for students enrolled at Laney College to be involved in the campaign as interns to CESC and QuEST.

5. IMPLEMENTATION STRATEGY

The following is a summary of the various steps involved in auditing, managing, and installing Program Projects:

Customer Engagement

1. Customer contacts Project Administrator (PA). This may be the result of Program marketing efforts or outside contractors or vendors referring their clients to the Program.
2. Customer submits Customer Enrollment Application, and PG&E Data Release Authorization.
3. PA screens Customer for eligibility and interest
4. Upon determination of eligibility and interest, Customer submits Access Agreement.
5. Upon receipt of completed Access Agreement, PA will determine which Program services best meet the needs of the Customer and align with the goals of the Program. PA will recommend Program services and keep QuEST engaged in or informed about the services provided and the status of Program activities.

Audit

1. PA dispatches a Project Manager to complete a “batch” of audit orders.
2. Project Manager schedules visit with Customer (within 1 week of receiving work orders).

3. Project Manager conducts the energy survey (within 2 weeks of receiving work orders). The energy survey will entail an energy baseline analysis which focuses on establishing baseline energy consumption, with PG&E account data if possible, and verifying actual power consumption of specific equipment so that accurate project savings calculations can be made. Auditor gathers information to analyze operational schedules and efficiencies in Customer facility as determined through discussion with facility staff. If equipment metering is required, Auditor will install all equipment needed to calculate the Project baseline energy usage.
4. Auditor identifies opportunities to install Program Measures.
5. Auditor identifies opportunities to leverage services and incentives from appropriate PG&E Third Party Program.
6. Auditor analyzes energy baseline and proposed data to generate an analysis of viable energy efficiency options and documents these in an Audit Report. The Audit Report includes, but is not limited to, estimates of Measure energy savings, Measure costs, Project payback period, and Incentive estimates based on potential energy savings.
7. Auditor presents Audit Report to Customer and pursues Customer acceptance of proposed Project installation. Customers not interested in pursuing the recommendations in the Audit Report are under no further obligation. The Customer, as a California consumer, is not obligated to purchase any full fee service or other service not funded by the Program.
8. After Audit Report is presented to Customer, the Program may invoice funding agency for the audit. Senior Program staff will conduct quality control checks on audits throughout the Program.

Project Installation

- Program staff sends “batch” of work orders (Projects) and related Customer/Contractor Work Order Agreement to Installation Contactor(s). As multiple technologies may be installed, multiple Installation Contractors may be required.
- In order to minimize trips to the Customer site, the Project Manager will have the Customer sign the “boilerplate” Customer/Contractor Work Order Agreement at the time of Project acceptance
- Installation Contractor accepts or refuses work orders (via email or documented means). If requested from Project Manager, Installation Contractor will provide manufacturer and model number for equipment prior to installation.
- Installation Contractor schedules installation date with Customer (within 1 week of receiving work orders) and obtains Customer signature on the Customer/Contractor Work Order Agreement, if for some reason the Customer has not yet signed this Customer/Contractor Work Order Agreement. Project Manager will work closely with the Customer and Installation Contractor to ensure Project is installed according to the agreed-upon timeline.
- Installation Contractor issues Change Order for scope of work changes (if necessary) to PA.
- Change Order is reviewed, and accepted or rejected by PA. The PA issues a Change Order Authorization for accepted Change Orders.
- Installation Contractor completes Project (within 20 days of initial contact with Customer) and signs Project Completion portion of Customer/Contractor Work Order Agreement. Installation Contractor provides Customer with warranty documentation for all equipment installed.
- Customer and Installation Contractor sign Project Completion and Acceptance Certificate.
- Installation Contractor submits to Project Manager all required documents, including a list of the quantity, manufacturer, and model number for all equipment installed and the Project Completion and Acceptance Certificate.

- Upon receipt of all required documents, the Project Manager shall conduct Project site inspections to verify installations at a random sample of sites per batch. Up to 100 percent of all Project sites may be inspected.
- For Projects passing the site inspection, the PA shall pay the Incentive portion of the installed costs to the Contractor and invoice the Customer for the remaining portion of installation costs.
- For completed Projects, the PA will establish communication with Project facility operators to ensure adoption of technologies persist and that equipment is operating as intended. Customer training will be provided to ensure control technologies are being used to their maximum efficiencies. Building controls technicians from Program workforce development efforts will assist in collecting data and help develop data driven diagnostics to improve ongoing monitoring systems in participating facilities.
- If Project does not meet Program specifications, Installation Contractor must remedy the problem (within 10 days of notice of QC failure) before Incentives and invoices for that Project will be issued. In addition, payments will be withheld on any Projects which have Customer complaints or claims. Payment will be released when complaints and claims have been resolved.

5.1 AUDIT PROCEDURES AND MATERIALS

The Program approach to facility audits, when energy savings and systems optimization are the main goals, is to provide a rigorous engineering analysis of how the major building systems utilizes energy to reliably deliver indoor comfort and air quality. The process verifies that the claimed energy reductions actually occur after implementation is complete. Specific verification activities associated with the on-going performance monitoring systems assure that the facility operators have the tools to maintain the energy reductions throughout the life of the mechanical and electrical systems.

The audit planning phase emphasizes review of available documentation, identifying current facility requirements, and documenting building and systems operation plans. With these documents as a basis, pre-functional and functional tests are developed. After conducting site visits, reviewing available building documentation, and working with the facility manager to identify current facility requirements, the Program Team develops a building plan, and is well prepared to design performance monitoring systems.

Documenting the current facility requirements is important, so that the current operators and commissioning providers may understand what requirements the systems and equipment were required to meet. This provides a basis for understanding the operation, capabilities, and deviation from the original design. If most of the building information is available, the requirements can be quickly developed, thereby minimizing delays and reducing costs. As in many facilities, obtaining existing design specifications and drawings can be a challenge, if so, equipment manufacturers may be contacted to obtain installation and O&M manuals and performance data. For missing information, performance evaluation activities may be included as part of the pre-functional and functional test procedures.

The Program will provide rigorous engineering analyses of major building systems of applicable participating buildings/facilities to reliably deliver indoor comfort, air quality, and verifiable energy efficiency. For each participating building/facility, the Program will:

- Review available documentation that identifies current facility requirements, including building and system operational plans;
- Conduct pre-site walk through;
- Develop performance monitoring strategy;

- Perform engineering analysis and audit, and develop and present energy conservation recommendations;
- Place graduates from Oakland Green Jobs Corps graduates with an interest in pursuing engineering or technical degrees in 2 or 4 year college programs, as interns with the Audit Contractor engineers to shadow them and participate in the building walk-through and engineering analysis and audit process; and
- Work with PG&E to leverage EBEW funding for additional coordination, outreach, auditing, and tracking system resources.

The Program has adopted a set of standard procedures and formats for energy-efficiency audits performed as part of the Program (Audit Standards). The purpose of the Audit Standards is to ensure an adequate minimum quality and completeness for Program audits, as well as to establish a set of accepted formats for the transmission of audit information to the Customer, the PA and the Installation Contractor.

The following Audit Standards are designed to provide quality control while allowing auditors to customize Projects to maximize energy savings. The Audit Standards are to be used in tandem with the Program Equipment Specification and Fixture Retrofit List. To assure uniformity across multiple participating companies, all audits shall be recorded using Program database software. These Audit Standards define the responsibilities of those firms approved to perform auditing services for the Program (Auditing Contractors or Auditors). The Program shall evaluate these Auditing Contractors throughout the duration of the Program in order to ensure quality control of the auditing work performed.

Project Selection

Customers interested in participating in the Program shall contact the PA or be identified through community outreach efforts. Sites eligible for audits shall be screened and assigned by the PA.

Auditor Protocols

Auditors participating in the Program shall be representing the Program, and therefore shall maintain a high level of professionalism. Auditors shall adhere to the following Auditor Protocols:

Response Time

- Within a week of receiving an auditing request from the PA, the assigned Project Manager shall establish contact with the given Customer and coordinate a date and time to perform the audit.
- Audits shall be performed no later than two weeks from receipt of request from the PA, unless otherwise arranged with the PA.
- A reminder call shall be made the day before the audit and the name of the person performing the audit shall be provided.
- Normal auditing hours will, in general, be considered normal business hours (8:00 a.m. – 5:00 p.m. on business days).

Program Identification

- Auditors with direct Customer contact shall have Program identification badges clearly displaying their name.
- Auditors shall communicate their presence any time they enter or exit a facility.

- Auditing personnel shall also be familiar with the general parameters of the Program and be able to answer basic Customer questions. Auditors shall be provided with an informational sheet explaining the Program and the next steps.
- When the Customer has additional questions that the Auditor cannot answer, the Auditor shall communicate or have the Customer communicate such questions to the PA.

Computer Hardware Requirements

Auditors will have the following hardware in order to utilize the lighting audit and project tracking software application used in the Program:

- MS Access 2003/ 2007
- Internet connection

Appearance and Demeanor

Auditors are both ambassadors and sales agents for the Program. They shall be considerate of the fact that they are entering a professional environment where Customer contacts are being managed. Auditors shall be well groomed, including appropriate personal hygiene and clothes that are both clean and in good condition.

All participating auditors shall use the field audit form and the auditing database software provided by the Program. The database shall provide consistent coding for existing installations and recommended measures, as well as standard formatting for audit results and other reporting. This approach is necessary to maintain quality, standardize reporting, and assist in project tracking. Also, to the extent that reports will be similar across the many participating clients, standardization will assist in Program branding and reporting.

Document Existing Conditions

After the PA qualifies a small business for participating in the Program, the auditor shall perform a complete evaluation of the Customer facility energy systems. Each audit performed shall clearly document the existing conditions. While other details of the existing condition may be required, the Audit Report shall, at a minimum, provide:

Audit Information for Lighting Efficiency Measures

- Square footage of facility space affected by lighting;
- Note of air-conditioning use, if any;
- Current hours of operation (on a room-by-room or fixture basis, if necessary) and temporary conservation efforts (e.g. delamping of fluorescent fixtures during energy crisis);
- Line-by-line detail of fixture and/or lamp types, and quantities;
- Fixture wattages, voltage, ballast types, and lamp types (determined by spot check of typical fixture);
- Switching and controls (e.g., single, dual, timer, occupancy sensor, photocell, dimmer), especially when accompanied by a recommendation to replace incandescent with fluorescent lamps;
- A legible, hand drawn facility map with labeled rooms and locations of existing and recommended lighting technologies;
- Fixture height and mounting (e.g., surface, recessed, strip);
- Diffuser/Lens (e.g., flat prismatic, parabolic, wrap);

- Existing light levels (footcandles) in key locations, especially where delamping will be recommended. A record of existing light levels must be submitted for any delamping recommendation;.
- Broken lenses, code violations (e.g., faulty wiring);
- Emergency lighting fixture locations;
- Width of 8' lighting fixtures (excluding hood); and
- Digital photos of unusual fixtures or lighting layouts that will help in designing or installing the Retrofit.

Audit Information for Refrigeration Measures

- Square footage of facility space;
- Note of air-conditioning use, if any;
- Current hours of operation (especially in kitchens where use of walk-in refrigeration units may be high); and
- Detail of each refrigeration unit requiring energy efficiency measures, including:
  - Type of unit (e.g., walk-in freezer, walk-in cooler, reach-in freezer, reach-in cooler);
  - Location , Manufacturer and model number of unit;
  - Current Reach in case lighting and number of doors;
  - Current fan motor i.e., Shaded Pole, PSC or ECM;
  - Square foot measurement of the door opening for strip curtains; and
  - Linear foot measurement of the door perimeter for gaskets.

Audit Information for HVAC Measures

- Square footage of facility space;
- Record nameplate data;
- Switching and controls; and
- Name of current HVAC contractor, if applicable.

Additional energy efficiency opportunities to be referred to PG&E Third Party Programs

- Window Tint
- Ozone Laundry

Specify Energy Efficiency Improvements

The Program's goal is to achieve energy and demand savings while improving lighting quality and/or HVAC performance.

For lighting, the system shall provide appropriate light levels (footcandles) that meet current Illuminating Engineering Society (IES) recommended levels. Various technical considerations shall be taken into account when auditing a facility. A complete list of eligible equipment under the Program is contained in the Equipment Specification and Fixture Retrofit List. While not limited to the following issues, the Auditors shall be prepared to recommend measures such as:

- Wireless and Daylighting Controls are encouraged, where applicable. These include:
  - Occupancy Sensors
  - Daylighting photocell
  - Night light photocell
  - Master/slave ballasting
- Advanced CFL Down Lights

- SMART Wall Pack Fixtures
- SMART Parking Lot Bi-Level Fixtures
- Integrated Office Lighting Systems (IOLS)
- Integrated Classroom Lighting System (ICLS)

For refrigeration, all nameplate information (manufacturer and model number) and appropriate unit quantities for all equipment must be provided.

- LED Refrigerator Case lighting

Identify Other Energy Efficiency Opportunities

While performing audits, Auditors shall identify other energy savings opportunities that may not be incentivized by the Program. These opportunities shall include no-cost Measures such as setting refrigeration controls to optimal set-points, task equipment left on while not in use, or poor weatherization of the building envelope. The Auditor shall collect name plate data on HVAC and refrigeration equipment. The Auditor shall be prepared to inventory other energy inefficiencies for Customer referral to other PG&E Third Party Programs.

Auditing/Specification Deliverables

Audits of Customer facilities shall be considered complete when the Auditor has presented the Audit Report to the Customer, made a good-faith effort to gain Customer acceptance of the proposed Retrofit, and provided both electronic and hardcopy documents to the PA.

The completed documents shall conform to the Program auditing software input requirements, including:

- Name of Auditor
- Date of Audit
- Time duration of audit
- Accurate Customer information, including utility billing information, and approximate square feet of facility
- Historic consumption
- Existing conditions
- Proposed Retrofit
- Estimation of energy and power savings
- Notes to document qualitative issues.

All Auditors will be expected to perform the following tasks:

- Complete audit and Audit Report;
- Track Audit Reports with the Program database;
- Present Audit Report to Customer and pursue Customer acceptance on the Customer Participation Agreement;
- Provide a status report on Projects (e.g., scheduled, site visit complete, Audit Report presented to Customer) recorded in the Program database;
- Complete Audit Reports filed electronically using the Program database;
- Provide to PA hard copies of field Audit Reports, including any site maps, and photographs;
- Correct incomplete or inadequate audits and/or energy reports; and

- Make a good faith effort to obtain signed Customer Participation Agreements for each audit performed. A 50 - 60 percent Customer acceptance rate on all Projects presented is expected.

The above requirements shall be communicated through the Program auditing database. Copies of information shall be filed with the PA via hard copy records. Hardcopy records include such things as facility maps and fixture photographs, and shall be provided in a folder labeled with the Customer name and address.

Of greatest importance is the Audit Input Form, which lists individual specifications (existing and proposed systems) for every area, with all other documentation regarding fixture types, controls, height of fixture, light level readings, fixture quantities, and schedules. The information entered on this form will follow a nomenclature previously agreed upon by the PA and Auditor. Prior to submission to the PA, all audit documents shall undergo a quality assurance review. Completed survey documents shall be received by the PA within one week of audit date.

Final Acceptance

Upon receipt of Audit Report, the PA may conduct a Quality Control (QC) survey before final acceptance. The Audit Report shall be reviewed for completeness. After a probationary period, during which 100 percent of the sites shall receive a QC survey (to ensure that the Auditor is fully complying with Program requirements), the QC surveys shall be performed on a random basis unless QC surveys warrant resuming a probationary period.

To be acceptable, the specified lighting system must be capable of maintaining minimum light levels as specified by the IES. If these light levels are not maintained, or if a delamping Project results in light levels that are unacceptable to the Customer, the Auditor may be called in for resolving the issue with the Customer and may be held responsible for costs incurred in any modifications to restore light output to acceptable levels.

To be acceptable, the specified refrigeration equipment must replace damaged or non-existent equipment, and must meet the manufacturer's installation specifications, specifically regarding dimensions, materials, attachment methods, style, compression, and magnetism.

Correction

If during the process of a QC survey, Program staff find discrepancies from the Audit Standards, Equipment Specifications, or the Work Order, the Auditor is responsible, at the Auditor's expense, to bring the Audit Report into conformance with the Audit Standards, Equipment Specifications, and the Work Order before the Incentive will be paid. Future Incentives on other Projects may be withheld until the Audit Report in question is brought into conformance. Corrections as identified during final acceptance or QC surveys shall be performed within 10 normal business days.

Customer Acceptance

After QC, Auditor shall be responsible for presenting the results of the audit and proposed Retrofit to the Customer. Auditor shall pursue Customer acceptance on the Customer Participation Agreement. A 50-60 percent customer acceptance rate on all Projects presented is expected, as well as 20 percent overall energy savings.

5.2 INSTALLATION CONTRACTOR RECRUITMENT

Installation Contractors are enrolled in the Program to encourage and ensure the implementation of Program Measures. Installation Contractor participation is solicited through a combination of referrals and Program announcements targeted at experienced equipment installers. Additionally, CESC Smart Lights program works with more than 20 lighting contractors and three refrigeration contractors, which will be used as appropriate for Project work.

5.3 INSTALLATION CONTRACTOR ELIGIBILITY & ENROLLMENT

All potential Installation Contractors will be screened to ensure that they have a history of providing good service to customers. At least three project references will be checked before contractors can participate in the Program as Installation Contractors. CESC will apply its Smart Lights program contractor requirements, as follows:

Contractors will provide:

- Business Information
  - Tax Identification No.
  - Business License number:
  - Contractor License Number.
  - City and Date Incorporated:
  - Affidavit of Compliance with Recycling Requirements
  - Injury and illness prevention program
- List of manufacturer and model numbers for most commonly installed equipment
- Copy of Standard Warranties – 1-year labor warranty required
  - Include Customer procedure in using the warranty
- Class C Contractor License from the California Contractors State License Board for electrical work
  - Proof of any required certification of all field staff working in the Program
- Insurance and licensing requirements

  Installer shall maintain at all times during the installations performed for the Program the following Licenses and insurance:
  - Workers' Compensation
  - Commercial general liability insurance policy with a minimum occurrence coverage in the amount of $1,000,000*
  - Automobile liability insurance policy in the minimum amount of $300,000
- If any licensed professional performs services for the Program, a professional liability insurance policy in the minimum amount of $1,000,000 to cover any claims arising out of Installer's performance of services under the Program.

*Commercial general liability insurance shall name CESC, their officers, agents, volunteers and employees as additional insured and shall provide primary coverage with respect to CESC.

All insurance policies shall provide that the insurance carrier shall not cancel, terminate or otherwise modify the terms and conditions of said policies except upon thirty (30) days written notice to CESC.

5.4 INSTALLATION CONTRACTOR TRAINING & SUPPORT

QuEST will provide training and implementation oversight to ensure energy savings in participating facilities and the proper use and installation of technology. Specifically, QuEST will provide training to Installation Contractors through some or all of the following:

- Screening of Installation Contractors;
- Mandatory Installation Contractor participation in SEP orientation session;
- Conduct post-inspections for at least 20 percent of Projects to confirm installation and associated savings;
- Based on post-inspections, implement corrective action as needed; and
- Place Oakland Green Jobs Corps graduates with Auditors and Installation Contractors and performing the implementation of energy conservation recommendations

6. PROJECT REQUIREMENTS/APPLICATION PROCESS

6.1 DETERMINING CUSTOMER ELIGIBILITY

Eligible Customers and Customer Sites

All commercial Customers within the Program Target Area are eligible for the Program. All commercial property Customers, including Class A, B and C commercial office, retail, grocery, and other facility types, located within the Program Target Area will be contacted to participate. Eligible Projects may not be part of new construction, additions or expansions, first tenant improvement, or change in building function (e.g., changing a facility from a grocery store to a gym).

Small Commercial

- Facility must be located in Program Target Area
- Must be PG&E Customer with:
  - A1 account serving a single facility;
  - A6 account serving a single facility;
  - A10 account;
  - AE19 account; or
  - Hotel, motel, and other establishments that are clearly small businesses yet are billed on rates other than A1, A6, A10 and E19 rates
- Must have an average maximum electric demand less than 100 kW

Large Commercial

- Facility must be located in Program Target Area
- Must be PG&E Customer with:
  - Over 100,000 sq ft of occupied space

Verification of Eligibility

Proof of eligibility status as a small or large commercial Customer (defined above) is the responsibility of the Customer. Acceptable proof of eligibility is as follows:

- Current PG&E bill

6.2 FINANCING OPTIONS

The original Program proposal included financing from two sources, On-Bill Finance (OBF) from PG&E, and PACE. Currently the OBF is only open to governmental agencies and schools. PACE is currently not being offered in the Oakland area. QuEST will seek alternative funding sources to assistance in Project finance, however any new options are unlikely to be as attractive as OBF or PACE. The Team will work with PG&E to leverage:

- On-Bill Financing (OBF) for projects that cannot be financed through PACE. OBF can be used as finance vehicle for more temporal measures that cannot be financed through a PACE type program.

6.3 CUSTOMER RECRUITMENT

Customers will be recruited for Program participation via the marketing and community outreach strategies described in Section 3 above, and via the Customer engagement process outlined in Section 5 above.

The Program Team will provide Customers who are interested in participating but who have not selected or partnered with an Installation Contractor a Program overview, eligibility requirements, Project enrollment form, description of Customer responsibility, a sample audit scope of work, and the list of Installation Contractors.

Customers are not obligated to engage a Program Installation Contractor. Customers who elect to participate in the Program using non-Program contractors will be subject to all the same minimum standards for engineering services associated with the Program. These Projects will be reviewed and accepted on a case-by-case basis.

Customer Projects will be accepted on a first-come, first-served basis as Program funding allows.

6.4 CUSTOMER RESPONSIBILITIES

Customer responsibilities include:

- Review, sign, submit and abide by all required Program forms and agreements;
- Provide all requested information needed for Program representatives to develop accurate energy savings reports and to process all Program paperwork;
- Be available for all scheduled appointments with Program representatives;
- Provide access to site for Project installation and other Program activities as required; and
- Make timely payment to Installer of the non-Incentive portion of the total Project installation costs, as invoiced by the Installer.

Customer agrees that Program Measures must be purchased and installed between the official Program launch and March 31, 2012. All eligible applications and supporting documentation making request for Incentive payments must be postmarked no later than March 31, 2012.

Customer agrees, as a condition of participation in the Program, to remove and dispose of the equipment being replaced by the Program Measure(s) in accordance with all laws, rules, and regulations. The Customer agrees not to reinstall any of this equipment anywhere in California, or transfer it to any other party for installation in California.

Customer Self-Install Steps

If the Customer self-installs a Project or chooses a non-Program contractor to install Program Measures, the following steps shall be followed:

1. Customer must submit to the PA a signed Self-Install Application and Agreement, which requests additional Customer information and defines the terms of using contractors that are not pre-qualified by the Program.
2. The Program will verify that the proposed Measures qualify for Program Incentives. Program Incentives will be based on the estimated energy savings as calculated by the Project Manager during an audit verification. The Program reserves the right to request clarifications and/or changes in the contractor's audit or specifications.
3. Customer will assume all responsibility managing and paying the contractor or reassigning the incentive to the contractor.
4. Upon completion of the installation, the Customer shall schedule and complete a Quality Control inspection with the PA. Customer shall also submit a Project Completion Certificate, a Customer Tax Identification Form, and invoices for all equipment installed.
5. Once it has been determined that all paperwork is correct and that the installed equipment has been verified, the Program will issue a check for the Incentive made payable directly to the Customer. Invoices cannot be processed without a City Business License number, Tax Identification, and the address under which the License is registered.

QuEST Installation Assistance

While the installation of approved Projects is the ultimately the responsibility of the Customer. QuEST will provide implementation support activities involve tracking project progress and facilitating implementation as desired by the Customer. QuEST will offer installation assistance to all Program participants. This entails providing participants with assistance in drafting Measure specifications, preparation of an RFQ/RFP when implementation is going to be bid, performing pre-bid contractor "walk-through," and assisting the participant with technical assistance during the installation. When requested, QuEST may review alternative bids and lists of Installation Contractors (without recommending a specific Installation Contractor). QuEST will monitor installation progress in order to be ready to conduct any needed post-installation inspection as soon as the Project is complete, thereby ensuring that the Incentive is paid as quickly as possible.

6.5 APPLICATION SUBMITTAL

In order to be considered for participation in the Program, Customers must complete, sign and submit to the PA the following forms:

- Application for Energy-Efficiency Assessment
- Data Release Form: Authorization for QuEST to receive the Customer's PG&E account information.

Once determined eligible for the Program, Customers wishing to install the proposed Project will be required to sign a Customer Participation Agreement consenting to having a Program Installation Contractor install the Project, paying the non-Incentive portion of the Project costs, and adhering to the requirements of the Program. The Customer Participation Agreement will list the cost and energy (electric and gas) savings by Project Measure and will clearly identify

the portion of the total Project cost that will be paid by the Program and the amount to be paid by the Customer.

Prior to Project installation, the Customer must enter into an agreement with the Installation Contractor, governed by the Customer/Contractor Work Order Agreement.

A template and/or "boilerplate" language for this document will be provided by the Program, incorporating, by reference, the terms and conditions of the Customer Participation Agreement.

6.6 PRE-INSTALLATION INSPECTION

Prior to Project installation QuEST will inspect the Project to confirm that the base equipment is in place. At this point QuEST will query the Customer as to the level of professionalism of the Installation Contractor. Installation Contractors that receive low marks may be eliminated from the Program at this point. Pre-inspections will be conducted on at least 50 percent of Projects until the Program Team is satisfied that Installation Contractors fully understand the expected level of quality. Verification of the pre- and post-installation equipment specifications will be the responsibility of the Program Team. Program savings estimates may be modified to reflect inspection results. The Customer will be notified to correct any deficiencies before Incentive payment is finalized.

6.7 SECURING PERMITS AND COMPLYING WITH FEDERAL REQUIREMENTS

Program activities will comply with all local, state and federal requirements, as applicable. Installers are responsible for obtaining all required permits and licenses to comply with State and City building ordinances. All fees associated with the permits and licenses are the responsibility of the Installer and can be added to the installation costs. No work shall be performed in any area where there is a known or suspected code violation. If, in order to perform any Program work the Installer or the Installer's employees discover code violations, this work shall not proceed, and the Installer shall bring the area in question back to the existing condition, at no cost to the Customer, and shall inform the PA.

6.7.1 Davis-Bacon Act Requirements

The Davis-Bacon and Related Acts (DBRA) are administered by the Wage and Hour Division of the Department of Labor. These Acts apply to contractors and subcontractors performing on federally funded or assisted contracts in excess of $2,000 for the construction, alteration, or repair (including painting and decorating) of public buildings or public works. All projects funded by ARRA monies must comply with DBRA requirements.

The Program Team will ensure that all Subcontractors or vendors engaged to work for the Program are paid in compliance with federal prevailing wage law (Davis-Bacon Act and Contract Work Hours and Safety Standards Act), and with state prevailing wage law. When advertising for a public contract opportunity, the Program Team and its Subcontractors or vendors must attach the applicable wage determinations to the solicitation, assistance agreement, and resulting contract or grant. The Program Team agrees to pay not less than the specified general prevailing wage rates to all workers employed in the execution of the Program subject to the requirements of California Labor Code Section 1770 et seq. The Program Team is responsible for ascertaining and complying with all current general prevailing wage requirements and rates for crafts and any rate changes that occur during the life of the contracts entered into with the Program Team to perform Program work. Information on all prevailing wage rates and all rate

changes are to be posted at the job site for all workers to view. The Program Team is further responsible to keep accurate payroll records and comply with all other administrative requirements provided in the California Labor Code.

In order to ensure that the Program Team and Subcontractors pay prevailing wage rates and submit weekly certified payrolls for all workers that perform labor and mechanic work to achieve the goals and objectives of the Program Agreement, the Program Manager shall:

- Submit to the Commission Contract Manager a copy of applicable wage determinations for any and all labor and mechanic work that will be performed to achieve the goals and objectives of the Program Agreement (including any subcontract) within thirty (30) days of execution of the Program Agreement. If Subcontractors will perform labor and mechanic work, the Program Manager must submit a copy of applicable wage determinations to the Commission Contract Manager within thirty (30) days of execution of the subcontracts.
- Submit to the Commission Contract Manager on a weekly basis a copy of all certified payrolls by the Program Team and Subcontractors of any tier performing labor and mechanic work to achieve the objectives of the Program Agreement. Exhibit E.2.M of the Program Agreement (Davis-Bacon Act and Contract Work Hours and Safety Standards Act) provides the required specifications for certified payrolls.

Basic Provisions/Requirements

The Davis-Bacon Act requires that all contractors and subcontractors performing on federal contracts (and contractors or Subcontractors performing on federally assisted contracts under the related Acts) in excess of $2,000 pay their laborers and mechanics not less than the prevailing wage rates and fringe benefits listed in the contract's Davis-Bacon wage determination for corresponding classes of laborers and mechanics employed on similar projects in the area. The appropriate worker classification for the scope of work is the "general laborer" for non-residential lighting technician work and "electrician" for all electrical work. Contractors and subcontractors on prime contracts in excess of $100,000 are required, pursuant to the Contract Work Hours and Safety Standards Act, to pay employees one and one-half times their basic rates of pay for all hours over 40 worked on covered contract work in a workweek. Covered contractors and Subcontractors are also required to pay employees weekly and to submit weekly certified payroll records to the contracting agency.

Notices and Posters

Every employer performing work covered by the labor standards of the DBRA must post the WH-1321 "Employee Rights Under the Davis-Bacon Act" poster at the site of the work in a prominent and accessible place where it may be easily seen by employees. There is no particular size requirement. The wage determination must be similarly posted.

Recordkeeping

Under the DBRA, covered contractors must maintain payroll and basic records for all laborers and mechanics during the course of the work and for a period of three years thereafter. Records to be maintained include:

- Name, address, and Social Security number of each employee
- Each employee's work classifications
- Hourly rates of pay, including rates of contributions or costs anticipated for fringe benefits or their cash equivalents
- Daily and weekly numbers of hours worked

- Deductions made
- Actual wages paid
- If applicable, detailed information regarding various fringe benefit plans and programs, including records that show that the plan or program has been communicated in writing to the laborers and mechanics affected
- If applicable, detailed information regarding approved apprenticeship or trainee programs

Reporting

Each covered contractor and subcontractor must, on a weekly basis, provide the federal agency a copy of all payrolls providing the information listed above under “Recordkeeping” for the preceding weekly payroll period. Each payroll submitted must be accompanied by a “Statement of Compliance.” The contractor, Subcontractor or the authorized officer or employee of the contractor or Subcontractor who supervises the payment of wages must sign the weekly statement. Statements of Compliance are to be made on the form WH-347 "Payroll (For Contractors Optional Use)" or on any form with identical wording. This must be completed within seven days after the regular pay date for the pay period.

Contractors may also be asked to submit, via survey, wage data that may be used by the Wage and Hour Division to determine the locally prevailing wage rates that will apply to workers on Davis-Bacon and DBRA-covered projects. The submission of wage data is encouraged, but voluntary. Contractors and others may use the WD-10 Form, Report of Construction Contractor’s Wage Rates.

Penalties/Sanctions

Contractors or subcontractors found to have disregarded their obligations to employees, or to have committed aggravated or willful violations while performing work on Davis-Bacon covered projects, may be subject to contract termination and debarment from future contracts for up to three years. In addition, contract payments may be withheld in sufficient amounts to satisfy liabilities for unpaid wages and liquidated damages that result from overtime violations of the Contract Work Hours and Safety Standards Act (CWHSSA). Contractors and Subcontractors may challenge determinations of violations and debarment before an Administrative Law Judge. Contractors and Subcontractors may appeal decisions by Administrative Law Judge's with the Department's Administrative Review Board. Final Board determinations on violations may be appealed to and are enforceable through the federal courts. Falsification of certified payroll records or the required kickback of wages may subject a contractor or Subcontractor to civil or criminal prosecution, the penalty for which may be fines and/or imprisonment.

6.7.2 National Historic Preservation Act Requirements

The Program Team and any Licensed Contractor installing Program Measures will comply with the requirements of Section 106 of the National Historic Preservation Act (NHPA) prior to expenditure of SEP funds under the Program Agreement to alter any structure or site. The CEC has executed a Programmatic Agreement with the California State Historic Preservation Officer (SHPO) to streamline the Section 106 consultation process. Under the Programmatic Agreement, the CEC will evaluate projects to determine whether they are categorically excluded from the SHPO’s direct review and consultation.

QuEST will:

- Consult with the Energy Commission (and with the SHPO and the Tribal Historic Preservation Officer (THPO), if applicable) to ensure that the proposed Project(s) will have no adverse effects on historic resources.
- Prepare a Consultation Package as specified by the Energy Commission no later than thirty (30) days after the execution of the Program Agreement or the identification of a Project structure(s) or site(s) to be retrofitted under the Program Agreement, whichever is later. The Energy Commission may specify an earlier time for submittal of the Consultation Package if Retrofit work is expected to begin within thirty (30) days of Project identification.

6.7.3 Waste Management Plan Requirements

The Program Manager will submit to the Commission Contract Manager a Waste Management Plan for each individual Project no later than thirty (30) days after the execution of the Program Agreement or the identification of any Projects that may generate waste, whichever is later. The Energy Commission may specify an earlier time for submittal of the Waste Management Plan if Retrofit work is expected to begin within less than thirty (30) days of Project identification. Waste Management Plans will describe the plan to dispose of any sanitary or hazardous waste generated by any proposed Project activities. Sanitary and hazardous waste includes, but is not limited to, construction and demolition debris, old light bulbs, fluorescent ballasts and lamps, piping, roofing material, discarded equipment, debris, and asbestos. Waste Management Plans must also describe the categories and estimated volumes of wastes that anticipated to be generated by any proposed Project activities, and the disposal path for each category of waste. Waste Management Plans must comply with all federal, state, and local laws and regulations governing waste disposal. Below are Program guidelines for Project waste disposal, recycling and demolition.

Disposal, Recycling, Demolition

Installers shall proceed with work in a manner that allows the reuse of suspended ceiling tiles and grid support system, surface ceiling tiles, fixtures, and fixture mounting or support hardware unless otherwise directed by the PA. Installers shall also proceed with work in a manner that allows the reuse of fixture lenses. Installers shall document pre-existing damage to the materials listed above and report any such damage to the PA and the Customer. Installers shall reimburse the Customer for the cost of any property damaged by the Installer in the demolition or construction phase. Installers shall remove all materials, equipment and debris immediately upon completion of the Project or at the end of each workday (unless Customer agrees to provide storage space).

Disposal of Fluorescent Lamps, Non-PCB Ballasts, Fixtures and Other Materials

The cost of the proper disposal of lamps and ballasts, other than PCB containing ballasts, shall be reflected in the unit prices associated with each Project. The disposal of PCB containing ballasts shall be considered as a separate unit price item. Old ballasts and unused lamp holders shall be removed, except as otherwise specified. Lamps shall not be broken or crushed except in an acceptable manner at a proper disposal site. Fluorescent lamps shall be recycled, and other system components shall be recycled where possible. Removed lamps, ballasts, and other debris shall be recycled or disposed of off-site, in accordance with these standards, environmental health requirements and all applicable laws, codes, and ordinances. The Installer shall dispose of fluorescent lamps using a method, which at a minimum, recycles the mercury, glass and aluminum byproducts. Installer shall be required to sign an affidavit certifying that all lamps removed for projects under the Program are recycled in the proper fashion. Installer shall submit his/her recycling vendor list for verification that Installer is an active customer of the

recycling vendor. Installer shall dispose of removed fixtures. On-site refuse containers shall not be used for disposal of any material whatsoever, without prior approval of the Customer. While it is not mandatory, Installer is encouraged to recycle fixtures (as scrap metal, not for reuse) that are removed.

Disposal of PCB-contaminated Ballasts and Materials Including Incineration of PCB-Contaminated Materials

PCB ballast and components disposal shall include incineration of PCB containing components. Only PCB disposal companies that are registered with the U.S. Environmental Protection Agency shall be used (http://es.epa.gov/techinfo/specific/lamp-bal.html). Installer shall be required to sign an affidavit certifying that all PCB ballasts removed for projects under this Program are disposed in the proper fashion. Installer shall submit his/her disposal vendor list for verification that Installer is an active customer of the disposal company. Upon request, Installer shall provide the PA with a copy of transportation and disposal manifests and/or bills of lading to account for all PCB bearing ballasts removed from the site. Removed ballasts that are not certifiably free of PCBs shall be handled and disposed of by the Installer using a method which incinerates PCB-contaminated material and conforms to Local, State and Federal laws, codes and regulations. PCB-contaminated ballasts or material may not be disposed of in a landfill.

General

PCB-contaminated ballasts shall be processed and disposed of in the following manner using services provided by Salesco, Phoenix Arizona, or Allied Technology Group, Fremont, CA, or approved equal:

- Ballasts shall be placed in EPA-approved containers provided by the Installer and transported to an EPA-approved processing facility.
- All PCB-contaminated materials, solid or liquid, shall be disposed of by incineration in an incinerator having a full operating commercial permit from the EPA. Separate the PCB-contaminated portions of the ballasts from the non-PCB portions. Those portions that are not PCB contaminated shall be processed to reclaim recyclable components such as copper, iron and steel.
- Landfill of any PCB-contaminated material including capacitors, potting compound and process debris is prohibited.
- Installer's service personnel shall be, at a minimum, qualified individuals who have completed a formal training program in the handling, processing and safety precautions associated with PCB-contaminated material.

Clean-up Procedures

- All surfaces and articles contaminated by PCB's in the course of this work shall be cleaned in accordance with all applicable laws, codes, and ordinances. Sorbents, solvents and cleaners shall be used for this purpose in a manner consistent with their manufacturer's recommended practices and all applicable laws, codes, and ordinances.
- All soils and articles contaminated by PCB's as a result of this project shall be removed and disposed of at the Installer's expense. The area and depth of removal shall be determined by the local governing authority.
- The Installer shall provide, at Installer's expense, all necessary wipe test samples in relation to spills or leakage and all testing services shall be performed by a laboratory qualified in PCB analysis. Test methods shall meet EPA test method 808.

Containerization and Marking

- All PCB-contaminated ballasts and hazardous materials generated from project activities and clean up operations shall be placed in EPA specified containers. Only approved drums, tippler cans or wood crates conforming to EPA specifications shall be used.
- All containers used shall be sealed, marked, labeled, dated and stored in accordance with all applicable laws, codes, and ordinances.
- Leaking ballasts shall be stored in separate containers.
- Ballasts shall not be stored at the project site unless they are inside pre-labeled type DOT 17C or 17H drums. A maximum of five empty drums, pre-labeled type DOT 17C or 17H, shall be provided and left in the ballast storage area as directed for use by the Installer to pack additional ballasts as they are removed during the retrofit project. Drums shall be removed and replaced as necessary, with a limit of five drums placed at the project site at any time.

Transportation to Destruction/Servicing Facilities

- Installer shall comply with the regulations for the management of hazardous waste as specified in California Code of Regulations (CCR) Title 22, Division 4.5. If no more than two (2) 55 gallon drums of PCB laden ballasts are transported from any site, Installer shall be exempt from Title 22, Division 4.5, Chapter 12, Articles 1, 2 and 4 (per CCR Title 22, Div. 4.5, Chapter 42, para 67426.1.a.
- All ballasts shall be transported to an EPA-approved processing facility.
- All PCB-contaminated capacitors, components, debris and potting compound shall be transported to an EPA-approved facility for incineration.
- For the disposal of leaking PCB ballasts and associated material, the Installer and its subcontractors and vehicles must be licensed for the transportation and hauling of extremely hazardous wastes. The drivers of these vehicles shall be trained in the laws, rules and regulations governing the transportation of PCB-contaminated material. The vehicles must be plainly marked as specified by the U.S. Department of Transportation, EPA, State Department of Health Services, State Highway Patrol and State Department of Transportation.

6.8 COMPLETION OF WORK

Upon completion of Project work, the Installation Contractor and the Customer must sign a Project Completion and Acceptance Certificate stating that the Project has been completed according to specifications. Receipt of the executed certificate is required before the Program will issue Incentives.

6.9 INSTALLATION VERIFICATION

Upon receipt of all required documents, the Project Manager shall conduct Project site inspections to verify installations at a random sample of sites per batch. Up to 100 percent of all Project sites may be inspected. (See also Section 9 herein)

6.10 POST-INSTALLATION INSPECTION

To ensure that energy savings are verified, accurate and approved for Incentive processing, QuEST will**:**

- Conduct post-installation verification for at least 20 percent of all the buildings/facilities participating in the Program and for all participating buildings/facilities for which a Customer receives incentives over $10,000;
- Adjust or approve ex-ante energy savings associated with each of the recommended Program Measures (ex ante savings are the estimated or forecasted savings used for Project planning); and
- Prepare a verification report which includes ex-post energy savings with associated financial Incentive amount

(See also Section 9 herein)

6.11 INCENTIVE PAYMENT

Once the verification report described in Section 6.10 is prepared, the following steps for Incentive payment will be taken:

- The PA will send a final Payment Notification Form to the participating Customer and the Installation Contractor. If a Project fails post-inspection AND there is a significant change in the Project costs borne by the Customer (Customer co-pay), two weeks are allowed for both the Customer and Installation Contractor to review the Payment Notification Form. This two-week period allows the Customer to raise concerns regarding the Project. There is no waiting period if the Project passes post-inspection.
- Once the two-week Payment Notification period elapses, or if both parties notify the PA in writing (faxes are accepted) that there are no disputes with the Payment Notification Form prior to the two-week period deadline, Incentive payments will be made within six weeks.
- The PA shall pay the Incentive portion of the installed costs to the Installation Contractor and invoice the Customer for the remaining portion of installation costs.
- If the Customer self-installs Project Measures or elects to use a non-Program contractor, the Incentive payment will be made directly to the participating Customer.
- QuEST will record Incentive payments in the Program database.

IRS 1099 Filing and Reporting

The Project costs paid by the Program (Incentive) will have tax implications for all Installation Contractors and may have tax implications for the participating Customers, depending on whether the Incentive is paid to the Customer or directly to the Contractor. Participating Customers are encouraged to consult their tax experts.

Any Installation Contractor or Customer who directly receives an Incentive payment from the Program will be required to fill out Form W-9 (Request for Taxpayer Identification Number and Certification). Based on the information provided on Form W-9, a determination will be made as to whether a Form 1099 will be sent out. Generally, all non-corporations with total payments of $600 or more will receive a Form 1099 by January 31 of the year following payment. The Program will also submit a Form 1096 (Annual Summary and Transmittal of U.S. Information Returns) to the IRS, summarizing the total dollar value of all 1099 forms issued, along with copies of all 1099 forms mailed out.

6.12 ON-GOING MONITORING

The Program Team will conduct monitoring to ensure expected and on-going energy savings from the Measures installed at participating buildings/facilities. Specifically, the Program Team will:

- Establish a schedule of communication with facility operators to ensure adoption of technologies persist and that equipment is operating as intended;
- Offer Program participants the opportunity to enhance existing energy management systems with through the installation of wireless monitoring focused on the installed technologies (e.g. lighting loads for lighting projects and HVAC loads for HVAC measures). Data will be provided through a web-site that can help track savings. Related training and technical assistance will be offered by QuEST;
- Place Laney Community College building controls technicians with Program Team engineers to collect data and help develop data driven diagnostics to improve on-going monitoring systems in participating facilities;
- Follow up two months and six months after installation to ensure that Measures are functioning properly.
- Develop summaries of data review and recommendations to facility operators; and
- Develop case studies of facilities where wireless technology was deployed.

7. ELIGIBLE EFFICIENCY MEASURES

Eligible Program Measure technologies were selected as they significantly enhance many efficiency technologies already installed in many California commercial spaces, providing the needed savings increases that will come from better control of this high efficiency equipment. Additionally, many Program Measures reflect newer technology, e.g. wireless monitoring and controls, which can rectify outdated design. Program Measures have successfully demonstrated significant energy savings and are broadly applicable.

While the ARRASEP Program funds will be used for the Program Measures described in this Section 7 only, Program Measures will be integrated into a larger portfolio of Measures including HVAC diagnostics and other more mainstream technologies. Through the EBEW, participants will receive continued follow-up to promote the implementation of additional solutions (i.e., newer energy efficiency technologies, Demand Response and Distributed Generation).

Specifics about each Program Measure are presented below.

7.1 TYPES OF MEASURES

Lighting Measures

- Wireless Lighting Controls
- Simplified Daylighting Controls
- Advanced CFL Down Lights
- SMART Wall Pack Fixtures
- SMART Parking Lot Bi-Level Fixtures
- Integrated Office Lighting Systems (IOLS)
- Refrigerator Case LED Lighting with Occupancy Sensors
- Integrated Classroom Lighting System (ICLS)

HVAC Measures

HVAC Measures will focus on wireless constant-volume to variable air volume system conversion (wireless VAV control).

Fault Detection for Packaged Units and Air Handlers will be provided to participating Customers through the PG&E Third Party program, AirCare Plus using specifically trained contractors.

Non-Energy Saving Measures

Program Incentives shall not cover the costs associated with non-energy saving measures such as lighting fixture lenses, electric code improvements, new fixtures, and lighting design services.

7.2 PROCESS FOR ENERGY COMMISSION TO REVIEW AND APPROVE MEASURES

QuEST selected Program Measures based on CEC direction, and does not anticipate adding new technologies to eligible Program Measures. In the event that the need arises during the Program Period to add Measures, the Program Manager will work with the Commission Contract Manager to develop an acceptable and appropriate review and approval process. No Measures will be added to the Program without prior express written approval from the Commission Contract Manager.

The Program Team requires that Installation Contractors submit all proposals for customized Measures (Measures not listed as Program Measures) to Commission Contract Manager for approval prior to the first installation of any specific Measure, if deemed necessary. The Program Team will deliver proper savings documentation and other materials needed to support energy savings estimates for a proposed Custom measure.

7.3 EQUIPMENT SPECIFICATIONS

Equipment must meet the requirements listed below. Equipment must be installed according to the Program installation standards. For lighting installations, appropriate lighting levels must also be maintained. Installers shall submit manufacturer specification sheets before any products are installed, including all major components of fixture retrofits (e.g., lamps, ballasts, reflector kits, compact fluorescent lamps and fixtures, motors, controllers).

Wireless Lighting Controls

- Occupancy sensors, remote switches, wall switches and integrated wireless receivers that automatically turn lights ON when occupancy is detected and OFF when the room is no longer occupied. Photosensors also available.
- Devices can be designed to receive commands from a central computerized control system.
- Devices can also be designed to accept commands from a local controller.
- Advanced lighting control systems are estimated to reduce lighting energy requirements by 35- 50 percent in most applications.

Simplified Daylighting Controls

- Only on/off control technologies will be considered in this category.
- All sensors and controls shall be equipped with reliable means to guarantee the elimination of inappropriate on/off cycling.
- Ceiling-mounted daylight control systems shall include both sensor and lighting circuit switching devices, and shall allow adjustment of the daylight levels governing control points.
- Wallbox daylight sensors shall support bi-level switching, must not control more than 1000 watts and may also include integrated occupancy sensing.

Advanced CFL Downlights

- System utilizes a master/remote wiring approach which results in reduced energy and installation costs: mast fixture has ballast and one lamp, and remote fixture just has the lamp, modular snapin connector between the two.
- Electronic Multi-watt (26-42w), Multi-volt (120-277Vac) programmed-start ballast with end of life protection provided on master fixture.
- Fixture efficiency is 74 percent.

Bi-Level Induction Wall Pack Fixture

- Wall pack fixture with induction lamp and bi-level capable ballast connects to the occupancy sensor. After a certain time of vacancy the ballast will dim the lamp to 40 percent output reducing energy consumed.
- Induction lamp must last 100,000 hours with no less than 70 percent depreciation.
- Most come with 10-year equipment warranty.
- Fixtures must have a CRI ≥ 82.

SMART Parking Lot Bi-Level Fixture: Induction or LED

LED

- Parking lot fixtures with LED technology, uses an occupancy sensor and bi-level capable ballast to reduce light and energy during time of prolonged vacancy.
- 100,000+ hours lamp life
- Must be LM79 and LM80 IESNA tested
- CRI ≥ 71.

Induction

- Parking lot fixtures with Induction lamps and bi-level capable ballasts on occupancy sensors to reduce energy during times of vacancy.
- 100,000+ hours of lamp life
- CRI ≥ 82.
- Must have 10-year warranty.

Integrated Office Lighting System (IOLS)

- FineLite 9w plug-in LED personal lighting system to be used in conjunction with lowering light levels of ambient lighting throughout office space.

Refrigerator Case LED Lighting with Occupancy Sensors

- To qualify LED's must replace fluorescent lighting.
- LEDs must meet the following luminaire efficacies:
    - Premium tier: 35 lpw;
    - Standard tier: 25 lpw, and
    - Maximum power consumption of:

	5' Case Door		6' Case Door	
	End Light	Center Light	End Light	Center Light
Premium Tier	19 W	38 W	23 W	46 W
Standard Tier	25 W	50 W	30 W	59 W

- CRI ≥ 70
- CCT of no more than 5700 K
- An electronic power supply must be used in the new system. The LED power supply and ballast must have an efficiency of 80% or greater at 120 volts, have a power factor of 0.9 or greater, must experience no more than 20% of total harmonic distortion, have a minimum operating temperature of -20 °C or below, must meet California Energy Commission (CEC) Title 20 standby power standards for external power supplies and shall have a minimum 5-year Manufacturer Warranty.
- A product cut sheet and installation instructions must be provided by the manufacturer or vendor to the end use Customer and a written warranty must be issued to the Customer guaranteeing repair or replacement of defective electrical parts (including light source and power supplies) for a minimum of four years from the date of purchase.

Integrated Classroom Lighting System (ICLS)

Occupancy Sensors

- Occupancy sensors shall be incapable of being locked in a permanent "on" state.
- Occupancy sensors in residential applications must be manual-on/automatic-off only.
- Only passive infrared and/or ultrasonic or microphonic detectors are eligible. Combined infrared/ultrasonic or microphonic sensors are also eligible.
- Switch-mounted and wall- or ceiling-mounted systems must be hardwired and control interior lighting fixtures.
- Occupancy sensors must not be wired to control a load greater than that for which they are rated.

- The systems must include sensitivity and time delay adjustments. Maximum time delay shall be for no more than 30 minutes.
- Fixtures controlled by occupancy sensors must use program start ballasts in applications where fixtures are to be switched on more than 5 times per day.
- Program-start ballast must operate lamps in parallel so that others lamps stay on if any fail.

Timeclocks

- Time clocks shall be electronic, and must feature a minimum 3-hour battery back-up.
- For outdoor lighting without a photocell, astronomical timeclocks are required, so that on-off times will automatically change with the seasons.
- When specifications requiring removing an existing electronic ballast or retrofitting to a lesser quantity of lamps), then the lamps, their lampholders, and the ballast that powers them must be removed from the fixture and properly disposed of. The wires that fed the removed ballast shall be removed or shall be capped with wire nuts and shall not be left exposed.
- When specifications state that a fixture is to be removed, then the lamps and ballasts from that fixture shall be removed and properly disposed of, and the fixture itself shall be removed from its mounting and properly disposed of. The wires in the exposed junction box shall be capped with wire nuts and a suitable cover placed over the junction box.

HVAC Measures

The wireless VAV control technology works best in buildings built before 1980, preferably before 1970. Furthermore, the wireless controls are a very cost-effective solution for Class B and C office buildings where asbestos is more likely to be present. The following building profile will benefit most from wireless VAV control, and will, therefore, be targeted for Program participation for these Measures:

- 15+ years old without HVAC retrofits in the last 15 years
- Buildings with constant volume air handling units
- Pneumatic controls
- Any of the following HVAC systems:
    - Dual duct
    - Single duct (with or without reheat)
    - VAV with pneumatic controls

8. INCENTIVE FUNDS AND PAYMENT

8.1 RULES GOVERNING INCENTIVES

Program participants will receive an Incentive in the form of a discount on the total cost of the Project. In most cases, when the Customer uses a Program-qualified Installation Contractor, this discount will be paid directly to the Installation Contractor and be deducted from the invoice to the Customer. If the Customer self-installs a Project or uses a non-Program Contractor of the Customer's choice, the Incentive – minus applicable Quality Control fees -- will be paid directly

to the Customer. The Customer is responsible for paying for the non-discount portion of installation Project as specified by the Customer/Contractor Work Order Agreement.

The Program is funded by the ARRA SEP. Customers are not obligated to purchase any full-fee service not funded by the Program. Incentive funds are limited, and available on a first-come, first served basis until funding is fully depleted.

Incentives are awarded only to eligible Customers for the installation of recommended Program Measures. The incented Project equipment or system must be owned by the Customer and installed within the Program Target Area. The Measures must be installed at the locations described in each Customer Participation Agreement. Customers are ultimately responsible for compliance with all Program Terms and Conditions included as part of applicable Program forms.

The amount of the Incentive is based on the projected electricity demand reduction and/or energy savings, and the type of Retrofit. Incentives may not exceed a cap of 90 percent of Measure costs. The Customer Participation Agreement will list the cost and energy (electric and gas) savings by Measure and will clearly identify the portion of the total Project cost that will be paid by the Program and the amount to be paid by the Customer.

The maximum Incentive is $250,000 per site per Program year and $500,000 per Customer per Program year combined for all Incentives. QuEST reserves the right to consider and offer Incentive amounts exceeding these general limits for Projects that have exceptional value in meeting the savings goals of the Program.

Once an Incentive is pre-approved, QuEST maintains the right to lower the Incentive amount if the quantity and/or cost of Measures actually installed by the Customer differ from the pre-approved amounts. A refund for Incentives paid may be required if it is discovered that Measure(s) were not actually or properly installed or were subsequently disconnected within 36 months after installation.

The Customer must provide copies of all invoices or other reasonable documentation that verify the costs of purchasing and installing the Measures, including all materials, labor, and equipment discounts. Invoices must indicate a verifiable breakout of all Measures purchased for installation under the relevant application.

Incentive Levels & Calculations

Lighting Measures

Small Commercial Customers will receive Incentives through the EBEW program first then any additional Incentive will be paid for through SEP up to 90 percent of Measure costs.

Large Commercial Customers not served by the Boots on the Ground Campaign will receive Incentives from the PG&E CORE Non-Residential Retrofit or Retrocommissioning programs first than additional Incentives up to 90 percent of Measure costs.

HVAC Measures

The Program will offer aggressive Incentives for Wireless VAV Conversion, as it is believed that wireless technologies are not as well understood by the general marketplace and as such a higher Incentive will be required to move the market quickly. After PG&E incentives for the same Measures are calculated, Incentives will be paid at $1.75 / therm and $0.17 / kWh applied up to 90 percent of Measure costs.

8.2 VARIATION IN INCENTIVE STRUCTURE OVER PROGRAM TERM

As Program Measure technologies have relatively high costs and limited track records, it can be difficult to move these Measures in the marketplace. High first cost is a barrier for most energy efficiency but is even larger for Program Measure technologies. To reduce the first cost barrier, the Program will provide additional Incentives to those offered through EBEW with a target payback of no more than two years. Incentives will ramp down to the level offered by the IOU by the end of the Program Period. At this point the Program will transition to standard IOU Incentives and PACE financing as these Measures transfer to the mainstream. The Program is designed to "live" beyond the initial SEP 3 funding.

8.3 INCENTIVE PAYMENT PROCESS

See Section 6.11 above.

9. QUALITY ASSURANCE

The Program Team's internal procedures will ensure that the Measures for which Incentives are paid have been installed and commissioned to deliver the expected energy savings over the Measure's useful life. Quality control checks involve review of all applications, automated tracking system checks, and site inspections. Even with clear Program specifications and policies, gray areas are inevitable. The Program team will present these issues and its recommendation to the Commission Contract Manager, if necessary, to resolve them.

In order to facilitate on-going quality assurance and customer satisfaction, QuEST maintains a toll free "energy efficiency programs" telephone line for Customers, Installation Contractors, and utility clients. The number is 866-716-9400 and is answered in person during regular business hours. QuEST policy is to respond to messages left on voicemail on the next business day. All in-coming calls will be tracked in the QPM, QuEST's fully developed, web-based, program implementation tracking and reporting database (see Section 9.6 below for more information on the QPM).

9.1 RESERVATION AND APPLICATION QUALITY ASSURANCE/QUALITY CONTROL

The paper and electronic document review is a comprehensive evaluation of the various documents that are generated throughout the Project's execution. This review aims to verify that the Program documents are complete and that the key information remains consistent across the related forms for a Project.

Program documents that must be included in every Customer file are as follows:

- Customer Enrollment Application
- PG&E Data Release Form
- Access Agreement
- Energy Audit Report
- Project Participation Agreement
- Customer Participation Agreement
- Customer/Contractor Work Order Agreement
- Project Change Order Authorization (if required)
- Project Completion and Acceptance Certificate

- Equipment Installed list
- Site Inspection Checklist (approximately 70 percent of Projects will be inspected)
- Final Invoices

Special attention will be given to the following:

- Appropriate signatures have been obtained
- Dates have been recorded
- Customer contact information is complete
- PG&E account number and rate schedule provided
- Building type and size is documented
- Auditor and on-site quality control specialist visits are documented
- Communications with Customer are documented
- Installed quantities of technologies are accurately recorded
- Appropriate per unit charges are found on final invoice
- Final coupon amount is correct.

Peer Review

For every Project, QuEST will assign an engineer to handle the application review. In this review process, the engineer will assess if the submitted analysis is sufficient for replication, under the completeness check step for the pre-approval and final review phases. If not, then the engineer will select an appropriate method, gather the necessary information, and calculate energy savings (via spreadsheet tool, model, or other). The resulting energy savings will be the amount used for project reservation and possibly Incentive payment.

In any case, a senior engineer will review a junior engineer or a peer's analysis. The senior engineer providing the QC will have experience with the Measure in question. If a Project does not pass the QC process, the engineer tasked to that Project must redo the analysis as directed by the peer reviewer. This will be done in conjunction with the peer reviewer until satisfaction is achieved.

9.2 PROJECT VERIFICATION

Upon its completion, a Project will be inspected to verify that the installation is operating as planned and saving the estimated energy. The Program requires quality control activities to ensure that each Project has been designed and installed properly and documented accurately. For a proper inspection of the physical installation, the QuEST Engineer shall use the Program's Post-Install Site Inspection Checklist, have the Project file that includes the initial survey that documents the pre-and post-installation equipment, as well as all paperwork submitted by the Installation Contractor. The QuEST Engineer shall also be prepared with appropriate tools to complete the inspection. This may include but is not limited to a light meter, a "ballast discriminator," ladder, and assorted screwdrivers. Once on-site, the QuEST Engineer shall complete the checklist and document the following information as required:

- The quality control specialist's name
- Date of inspection
- Facility name and location
- The varying fixture types and configurations
- The quantity of each fixture type and configuration
- Lamp and ballast make and model

- Light meter reading taken in a consistent manner with what is documented in the initial survey
- Workmanship of installation, including fixtures and components properly installed lenses and reflectors cleaned, and premises left clean and in pre-install conditions.
- Brief review of findings as compared to initial survey, work order, change order, and final invoice.

If access to certain areas of the facility is limited, the QuEST Engineer may make reasonable estimates as to the lighting system likely to be found in that area. At least 25 percent of each fixture type and configuration should be visually verified, including opening up at least one representative fixture to verify ballast brand and model number, and fixture cleaning. If while conducting the review damage is done at the Customer facility, the QuEST Engineer should bring the damage to the Customer representative's attention and make arrangements for the damage to be repaired. Details of the on-site review should be recorded and included in the Project file.

Any corrections to be made by the Installation Contractor that are deemed necessary during the post-installation site inspection shall be recorded on a "punch list" and referred back to the Installation Contractor for correction. The installation will be considered incomplete and no payment shall be issued until the punch list has been corrected.

The QuEST Engineer will query the Customer as to the level of professionalism of the Installation Contractor and their satisfaction with the installation. Installation Contractors that receive low marks will be retrained or eliminated from the Program.

9.3 MEASUREMENT & VERIFICATION

As part of the verification needs, the Customer Participation Agreement includes Measure specification requirements and Programs policies (terms and conditions) for participation. The information collected on the Customer Participation Agreements, as well as contact log and Project milestone dates will be entered into a tracking system. Some of the fields collected are:

- Customer name
- Customer contact information
- Customer PG&E account number
- End-use measures installed
- Date stamping of program milestones such as:
    1. Application receipt date
    2. Application approval
    3. Payment date
    4. Inspection dates
- Status of a program team has audit
- Assigned engineer
- Incentives committed ($)
- Incentives paid ($)
- Leveraged incentives ($)
- Customer project cost associated with the measures, i.e. invoice amount ($)
- Projected energy savings (first year kWh)
- Projected demand savings (kW)

While the Program has a policy of self-verification through inspections and quality control, the Program Team also commits to meet Program requirements to ensure an effective EM&V process. An effective EM&V process is supported through early interaction between implementation and EM&V team members. Starting this interaction as soon as practical will

help set the various teams' expectations and align the data needs with the data collection steps the implementation team builds into the process.

Supporting EM&V efforts is an important component of implementation either through directly playing the role of the primary data gatherer or supporting the efforts of a third party EM&V. The Program Team will store all paperwork, reports, and other activity related to Program delivery to assist EM&V contractors with their analysis. The Program Team will actively engage, where allowed, with the EM&V contractors, as a collaborative process often allows for the optimal real-time adaptation of results into adjustments that can improve the Program.

9.4 BUILDING OWNER/OPERATOR TRAINING

Sustainability will be addressed through multiple activities to ensure persistence of savings for the installed Measures. Persistence of savings at the time of installation and verification will be addressed through increased building operator training. The Program Team will establish a regular schedule of communications with building owners and operators to ensure that the adoption of technologies persists and that equipment is operating as intended. QuEST will answer questions about the technology, offer additional training, and assist with any troubleshooting as needed.

The Program Team will endeavor to ensure that facility staffs understand the modifications that were made to their facility and provide them tools to compare future energy use to the baseline. QuEST provides training through project documentation, training sessions, and assistance with software and tools that can be used to analyze data and check equipment.

QuEST will provide tools for operators to use when checking the operation of the building equipment or when analyzing data to verify sequences and operation. QuEST-designed pre-functional test forms for investigating the mechanical and control systems can be customized for the facility and assist in determining that the equipment is in good working order and properly controllable. There are both completed and blank pre-functional test forms in the included systems manual. QuEST provides the blank pre-functional test forms to the operators and recommends they are performed approximately every six months.

QuEST may also provide customized training for each facility. Program trainers, and if needed Installation Contractors, will follow up with participants to ensure that they understand the installed technology and that they are extracting the maximum value out of their investment. Topics covered during the training sessions typically include the following but depend on the goals of the session:

- Review of systems manual or other documentation;
- Review of Measures that were implemented:
- Description of tools that can be used for maintaining savings (test forms, software, data analysis); and
- Description of use of measurement and verification for maintaining savings and determining future savings.

QuEST will provide CCM with facility operator training summaries including topics covered and attendees list.

9.5 FEEDBACK SURVEYS

The Program shall conduct Customer feedback surveys throughout the Program period in order to evaluate and improve the Program and generate new leads and referrals. For large

commercial Program participants, QuEST will conduct telephone feedback surveys. For small commercial Program participants, CESC will use surveymonkey.com to administer a Customer feedback survey on lighting Projects. The lighting Project survey will be similar to that used for the Smart Lights program found at www.surveymonkey.com/s/SmartLights.

9.6 PROJECT TRACKING

QuEST will use QPM, its fully developed, web-based, program implementation tracking and reporting database to comply with applicable Federal, State, ARRA, and DOE SEP related reporting and transparency requirements. The QPM is an online service that makes it possible to track the entire energy efficiency lifecycle of a project on a single platform. It offers program implementers, managers, and administrators access to program status data effectively and efficiently.

The QPM automates processes and information sharing for multiple end-users who must access high level program data as well as mid and low level project data over the course of each project's lifecycle. It has been designed to help users manage clients, program and project milestones, a library of supporting documentation, customer contacts, project budgets, and expenditures.

QuEST will create a repository for Program data and will incorporate Program-specific milestones into the QPM so that all users of the QPM will be aware of, and will comply with, the appropriate order of Program data collection and entry. In the event that Program requirements change, the milestones can be changed "centrally" and will apply at once to all end users. This type of flexibility allows QuEST to quickly and seamlessly incorporate Program changes as needed.

QPM was built using a combination of the PHP scripting language and the Ruby on Rails framework with a MySQL backend database. Encrypted passwords are used for all accounts. Connections to the application are made using industry standard HTTPS (Hypertext Transfer Protocol over Secure Socket Layer) with 128-bit encryption to ensure authenticated and secure communications. QPM has the following export capabilities: xls, csv, html, txt, and pdf. Any standard modern web browser that supports SSL connections can be used by system end users.

QPM accepts input .csv input files. QuEST can work with utility to "clean" or reformat existing data that is not in a CSV format prior to uploading it into QPM. Typically, utilities send QuEST customer data in Excel or text file formats. QuEST will transfer the data into a csv format prior to uploading it into QPM. For the sake of simplicity and accessibility data is generally imported and exported as delimited text files. QPM uses MySQL, an open-source relational database management system (RDBMS). Data is stored using MySQL's InnoDB technology, which provides MySQL with a transaction-safe (ACID compliant) storage engine that has commit, rollback, and crash recovery capabilities.

Using the QPM system will ensure that the tracking and reporting of Program funding will be performed in perfect isolation from other funding that may be leveraged to increase Program effectiveness. In other words, even though SEP funding might be used in conjunction with other funding, the reporting of SEP funding will be maintained separately.

All parties working on the Program will be required to use the QPM. In this way, QuEST is able to enforce a Program workflow and the appropriate corresponding reporting.

QuEST is familiar with the Program's reporting requirements and will ensure compliance through its ability to enforce rules pertaining to the collection of data

The method QuEST uses to collect Program data is governed through the rules established through using the QPM. In simplest terms, end users will enter data in the order the data is required in order to meet a subsequent workflow milestone. The order is sequential, enforced, and absolute. The enforcement of data collection is done automatically through the use of business rules established in the code of the QPM. Whenever changes to those business rules emerge, the changes are made centrally and immediately take effect for all end users.

The QPM will create reporting templates to demonstrate compliance at the start of the Program. These templates will include all data points identified in the ARRA Section 1512 Report, the USDE SEP Progress Report, and the Program Metrics identified in Attachment 7. Once approved, the reports will be housed on the QPM site for the Program. Depending on QPM end user role, the reports can be downloaded by the end user with the most up-to-date Program data reflected in it.

Creating additional reports, or the modification of existing reports, will be done centrally by QuEST and once approved, will also be made available for real time access through the QPM site for this program. Finally, all reports generated from QPM can be downloaded in MS Excel, CSV, or HTML formats.

QuEST will provide authorized staff with QPM usernames, passwords, and role driven privileges with which to access the QPM. A list of recommended user roles (or categories) and the associated privileges will be presented to CCM prior to program launch.

Financial and Accounting Processes and Procedures

QuEST utilizes Deltek GCS premier for effective and reliable project accounting and forecasting. Deltek GCS is designed specifically for small to mid-sized businesses that provide services to the U.S. government. The system will record, integrate and disseminate all financial information by defined Project and task through a single system. As a result the system will provide Project Managers with varying levels of detailed information and allows for the robust management of all Subcontractors. Deltek goes further than simply tracking project costs. It allows project managers to define contractual workforce rates along with other direct cost limits. One can define projects and tasks with upfront-integrated system controls by individual rates and budgeted costs by category. This provides added control at the point of input.

Automated financial reporting will be provided to Project Managers at mid month and month end. These reports will consist of Project job cost summaries by task, labor detail and other direct costs. In addition to standard system reports listed below, Project data will be customized to any format deemed beneficial to the CEC and DOE. Description of Management Reports are presented below:

- Job Cost Project Status Report – This report summarizes the financial status of a given project for a desired period at a glimpse. The report can be generated any time at varying levels of project and task detail.
- Labor Detail by Project and Task – This report provides individual labor detail by project and task for a given period of time. This report can be processed in multiple formats.
- Other Direct Cost - This report provides details of all other direct costs charged by project and task for a given period of time. This report can be processed in multiple formats.
- Accounts Receivable and Accounts Payable Reports – These reports include information on outstanding A/R and A/P including history.

9.7 DISPUTE RESOLUTION

A Customer call or email that clearly expresses dissatisfaction with the quality or sufficiency of the fully completed project, or dissatisfaction with the conduct or professionalism of the auditor, contractor, or installation crew who performed the work, constitutes a complaint. Complaints will be immediately escalated to the Program Manager at QuEST, who will contact all involved parties within two (2) business days in order to identify a mutually agreeable solution and an acceptable timeframe for resolution. If parties cannot agree on a solution and/or an acceptable timeframe, the dispute will be handled by an independent dispute mediation firm within 30 days of the failure to agree.

All complaints received by the Program Team through the Program hotline, e-mail or other means will be logged. The Program Team will also log all efforts made to resolve the complaint and document the final resolution.

Customer Claims

In the event that the Customer has a claim against an Installation Contractor or Auditor, the Customer shall state in writing the date, time, exact location, persons involved, specific nature and amount of loss, and any other information relevant to the claim, and deliver the claim to the Program Manager for consideration. If the Installation Contractor or Auditor is determined to be at fault, the Installation Contractor or Auditor shall remedy the claim at their own cost. Failre to do so may result in the Installation Contractor or Auditor being barred from further participation in the Program and forfeiture of any Incentive payment due under the Program.

9.8 INSTALLATION CONTRACTOR SUSPENSION OR DISQUALIFICATION

Probationary Period

Installation Contractors shall be subject to a probationary period (covering the first 5 installations) to ensure quality of work performed. The PA shall not release invoices on any Project during this probationary period pending any correction to the Project as deemed necessary by the PA. Upon completion of the probationary quality assurance period or whenever the Installation Contractor is in good standing after the probationary period, the PA will release invoices for a combined 100 percent of the Project costs, unless there is a complaint or claim made against the Installation Contractor. Invoices will be generated upon resolution of any complaints or claims.

Suspension or Disqualification Procedures

The Installation Contractor may be suspended or disqualified from participation in the Program for the following reasons:

- Neglecting to remedy a claim within a reasonable time. No Incentives will be paid to the Installation Contractor until the claim is remedied.
- Repeated failure to comply with Program requirements.
- Repeated denial of batches of Work Orders as stated in the Program's Installation Standards. Batches of Work Orders will be offered to the Installation Contractors on a rotational basis. If the Installation Contractor refuses a batch of Work Orders he/she will be placed at the bottom of the list. If the Installation Contractor refuses to install two batches within a 90-day period, his/her participation in the Program will be subject to review. Suspension from the Program may result from continued refusal of Work Order batches.

If suspended, the Installation Contractor must submit a written request to be reinstated, documenting actions taken to remedy cause for suspension.

10. RELATIONSHIPS TO PG&E ENERGY EFFICIENCY PROGRAMS

The Program will be fully integrated with current IOU programs including the infrastructure of the EBEW, a Local Government Partnership. The EBEW has served the needs of Oakland by collaborating with the City, PG&E, and local energy efficiency professionals. The Program will supplement this continuing collaboration with the public goods energy efficiency programs. Program outreach will be coordinated with the City of Oakland's Business Development team and with PG&E. The importance of working collaboratively with the local utility will not be underestimated, as PG&E is viewed as the energy expert by most Customers.

10.1 EAST BAY ENERGY WATCH

The EBEW is a Local Government Partnership Program serving Alameda, Contra Costa, and Solano counties in partnership with PG&E, the local governments, and energy professionals. EBEW activities include outreach and integration with PG&E's other programs. All Program participants will be notified of other program opportunities to help ensure comprehensive solutions. SEP 3 funds will only be used for the Program Measures, however these Program Measures will integrated into a broader and fuller solution in collaboration with EBEW and other programs that are offered to Oakland commercial Customers. The EBEW has additional components that address Measures that are outside the scope of the Program. Using the SEP 3 funds to target specific Measures will leverage EBEW funds to deliver even more results with the remaining funding to help increase energy efficiency comprehensiveness for participants.

Some of the audit services associated with the Program will be provided by the EBEW. The Program has been developed as a complement to the broader EBEW program offering which helps ensure that energy solutions are integrated together and not isolated. EBEW's goal is to bring clients a more comprehensive set of measures for energy efficiency, demand response, and distributed generation. Through the EBEW, participants will receive continued follow-up to promote additional energy saving solutions. The Program Team will make use of an EBEW web tool which identifies other appropriate energy efficiency programs that maybe well suited for EBEW participants. This tool will be deployed to Program participants to identify other opportunities for energy savings.

The integration with EBEW will ensure that the Program launches quickly. There is an existing pool of contractors that are ready to be trained to install the new Program Measure technologies, contractors that have already installed more standard technologies in a number of the targeted sites through EBEW. The local IOU, PG&E, is a partner in the EBEW and already has contact with many of these targeted building owners through their representatives for large Customer accounts. .

10.2 INNOVATOR PILOT PROJECT

EBEW has focused on comprehensiveness since its inception and is currently negotiating an innovator pilot program that will provide energy management at-large for participants in Oakland. The goal of the energy manager at-large position is to help participants manage multiple programs and projects through a single point of contact that is paid for through the EBEW – effectively serving as an energy efficiency account rep for the participant. The Program will leverage these resources through EBEW to perform some outreach and audit services.

10.3 AIRCARE PLUS THIRD PARTY PROGRAM

The EBEW focus is currently on improved comprehensiveness. By design, the EBEW will bring in other technologies and solutions offered primarily through Third Party Programs. In particular, the Program will leverage the Fault Detection Diagnostics for Package Units through a PG&E funded Third Party program called AirCare Plus (www.aircare-plus.com/). It is anticipated that the Program will tune up more than 1000 units through AirCare Plus.